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*A Hunger Free Community Report*

**CHILD  
NUTRITION:  
PROGRAMS,  
PROBLEMS, AND  
POSSIBILITIES**

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**Project Bread** is one of the leading state-wide anti-hunger organizations in Massachusetts. They provide access to food for people who are hungry today while working to break the cycle of hunger through advocacy, education, and community action.

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## EXECUTIVE SUMMARY

America is widely considered one of the most prosperous countries in the world, frequently regarded as a safe haven for struggling families and lauded as a land of opportunity for dreamers and achievers. Yet across the United States, roughly 12.5 million children struggle with hunger on a daily basis. These children are more likely to be at risk for developmental delays, nearly twice as likely to be in fair or poor health, and face far worse educational outcomes than their food-secure peers. From birth to beyond, these children are left behind their peers early on, putting them at risk for a wide range of adverse consequences later on in life. Put simply, this reality runs counter to our most basic American values - our children deserve more.

In partial recognition of this sentiment, Congress has authorized a wide range of child nutrition programs since the mid-1940s. From the National School Lunch Program, which serves 30 million children each year to the Special Supplemental Nutrition Program for Women, Infants, and Children which reaches over 7 million each month, our child nutrition programs do a great deal of good in alleviating childhood food insecurity, enhancing student performance, and improving health. Yet despite all the evidence in support of these benefits, our child nutrition programs are still falling short: Indeed, a true commitment to our children and our American values requires a constant commitment to continuous improvement.

The rest of this report proceeds as follows: In part 1, I begin by discussing the child nutrition programs that take place during the school day. These programs include the National School Lunch Program & School Breakfast Program, the Fresh Fruit and Vegetable Program, and the Special Milk Program. In part 2, I move on to out-of-school time. More specifically, I discuss the summer meals programs and the afterschool nutrition programs. Finally, in part 3, I discuss the child nutrition programs that target early childhood: The Special Supplemental Nutrition Program for Women, Infants, and Children, the Farmers' Market Nutrition Program for Women, Infants, and Children, and the Child and Adult Care Food Program.

Each section is structured similarly. I begin by discussing the need for a particular program after which I discuss the program basics, including a brief history, an overview of operation, and listing the program's current capacity. Next, I highlight the evidence in support of a program, offering my thoughts on program strengths. I then outline challenges and barriers for the program, posing suggestions on how programs may be improved. I conclude by listing best practices from across the country.

Throughout this report, we also hear from experts in the field. I included quotes from Project Bread staff to give a better sense of the real challenges school nutrition directors, sites, and sponsors face in their day-to-day work.

Ultimately, this report may serve as a beginning educational resource for staffers, legislators, and all those interested in child nutrition policy. In the fight against childhood hunger, there is always more to learn, more to innovate, and more to be done until every child receives the nutrition they need to thrive.

## PART 1: SCHOOL DAY

### **THE NATIONAL SCHOOL LUNCH PROGRAM AND SCHOOL BREAKFAST PROGRAM**

#### *THE NEED: WHY SCHOOL LUNCH?*

In 2017, according to the USDA's annual report, the prevalence of food insecurity among children was near the 2007 pre-recession level of 8.3%, with 12.5 million children under the age of 18 being classified as food insecure. This is problematic for a number of reasons: As highlighted in a Feeding America Study, child hunger has adverse consequences on health, education, and workforce/job readiness, among other issues.<sup>1</sup> As will be discussed later on, these consequences are particularly profound in the early years.

However, researchers have increasingly begun looking at adolescence as well, adopting a “teen lens” to look more specifically at teenage hunger. McLaughlin et al's 2012 study of 13 to 17-year-olds, for example, established that “standardized food insecurity was associated with an increased odds of past-year mood, anxiety, behavior, and substance disorders.”<sup>2</sup> Unsurprisingly food insecurity causes immense stress for teens: In the words of a teenage girl from San Diego, “if food's running low, it's pressure on me.”<sup>3</sup>

In recent years, research on childhood obesity has come to dominate food insecurity conversations – and with good reason. According to a National Health and Nutrition Examination Survey, 18.5% of US children aged 2 to 19 had obesity in 2015-2016.<sup>4</sup> Subsequently, every year, the US spends \$14 billion on childhood obesity.<sup>5</sup> It's further worth noting that obesity disproportionately affects low-income households: counties with poverty rates greater than 35% have obesity rates 145% greater than wealthy counties,<sup>6</sup> and looking specifically at childhood obesity, Sign and Kogan note that nearly half of all children in low-education and low-income groups in 2007 were overweight, compared with less than 23% of children in the higher-education or high-income group.<sup>7</sup>

#### *NSLP PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: The National School Lunch Program (NSLP) was established in 1946 after World War II revealed that many children in America were undernourished.<sup>8</sup> Signed into law as the Richard B. Russell National School Lunch Act, the National School Lunch Program has since grown to be one of the largest anti-hunger programs in the country.

Nutrition standards were first revised in 1994 and the NSLP continued to undergo minor changes from 2000-2004.<sup>9</sup> More recently, and in partial response to the rising obesity epidemic, the 2010 Healthy, Hunger-Free Kids Act made drastic changes to meal patterns.<sup>10</sup> Among other changes, by increasing fruits and vegetables in meal patterns and reducing sodium, the HFFKA made a giant leap forward in ensuring that America's children not only had access to food, but had access to healthy food.

Operation: Though the NSLP also offers a pathway for sites to provide meals during the summer through the Seamless Summer Option and after school through the after school snacks option, these topics will be discussed later: the remainder of this section will be dedicated to NSLP’s primary function, providing lunches. The NSLP offers support to schools through commodity foods and cash reimbursements. Commodity foods – “foods purchased by the USDA for distribution to USDA nutrition programs” – are given to schools based on the number of lunches they serve.<sup>11</sup> The value of commodity foods is also indexed for inflation.

Under the NSLP, all school lunches at participating schools are partially subsidized by the federal government, though the extent to which a meal is reimbursed and the actual price the child pays for it varies. Children whose household income falls at or below 130% of the federal poverty line are eligible for a free meal. Meanwhile, children whose household income falls between 130% and 185% of the federal poverty line are eligible for a reduced price meal. A school may charge no more than 40 cents for a reduced price meal. Finally, children whose household income is greater than 185% of the federal poverty line are eligible for a smaller paid rate reimbursement. The prices of paid meals vary from school to school.<sup>12</sup>

Reimbursement rates also vary slightly by school based on need and meal compliance. Schools in which 60% or more of students qualify for free or reduced price meals are offered slightly higher reimbursement rates. Additionally, schools who are in compliance with the Healthy, Hunger-Free Kids Act are offered an additional six cents per meal.

Reimbursement rates for school lunches in the 2018-2019 school year are as follows:<sup>13</sup>

National School Lunch Program					
	Less than 60%	Less than 60% + 6 cents	60% or More	60% or More + 6 cents	Price of Meals to Children
Free	\$3.31	\$3.37	\$3.33	\$3.39	\$0
Reduced Price	\$2.91	\$2.97	\$2.93	\$2.99	\$0.40 (max)
Paid	\$0.31	\$0.37	\$0.33	\$0.39	Varies

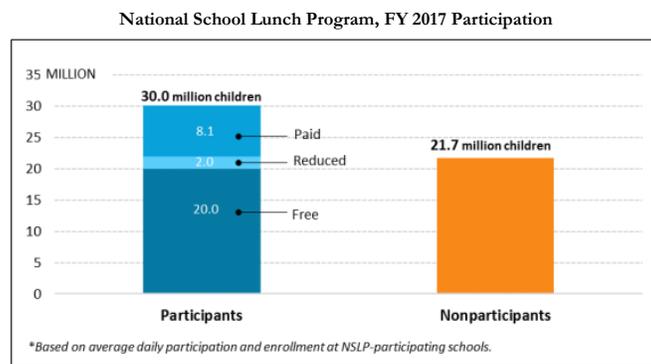
*Source: “Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs,” Food Research and Action Center*

Eligibility for free or reduced price meals can be determined in three ways. First, students may be directly certified by their household’s participation in SNAP, TANF, FDPIR or other government programs. Migrants, runaways, foster care children, Head Start children, and homeless children are also categorically eligible through this mechanism.<sup>14</sup> Households may also apply and be determined eligible based on their reported income level. Finally, schools may offer free meals to all students through either the Community Eligibility Provision (CEP) or Provision 2.

Schools and school districts in which 40% or more of students have been directly certified for free or reduced price meals may participate in CEP. Under CEP, schools are offered a reimbursement rate equivalent to 1.6 times the number of “identified students” (those students who have been directly certified for a free or reduced price meal). The rest of the meals served are reimbursed at the paid rate. Regardless, all students receive a free meal.

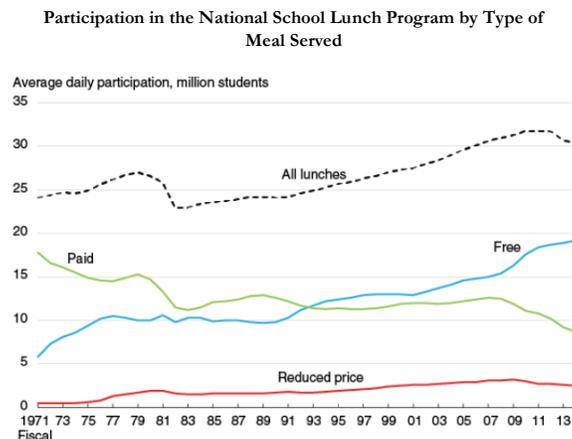
Alternatively, all schools that participate in the NSLP or the National School Breakfast Program (SBP) may participate in Provision 2. Like CEP, under Provision 2, all students receive a free meal. However, the reimbursement process is vastly different. Schools calculate the percentage of free, reduced-price, and paid meals served during their first year (or base year). For the next three years, they do not have to collect data but rather may be reimbursed at the same rate they were during their base year. Following the end of the fourth year, schools may continue for another four years, or if their income level has changed by more than 5 percent, calculate a new base year.

**Capacity:** In fiscal year 2017, nearly 30 million kids participated in the National School Lunch Program (29,991,934) each day resulting in nearly 4.9 billion meals served.<sup>15</sup> The program cost the federal government 12.25 billion dollars with an additional 1.39 billion in commodity costs. The breakdown of paid to reduced price free meals is as follows:<sup>16</sup>



*Source: Ausenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."*

At 20 million kids served, the NSLP is easily the largest child nutrition program. However, it is worth noting that since the end of the great recession and implementation of the HRFKA, participation has decreased slightly. The decline is particularly noteworthy in the number of paid meals served.<sup>17</sup>



*Source: Ralston, Katherine, and Constance Newman. "A Look at What's Driving Lower Purchases of School Lunches."*

## *NSLP EVIDENCE OF EFFECTIVENESS*

The National School Lunch Program has been heavily investigated, with researchers studying both short-term health effects and longer term indicators of well-being. Gundersen et al's study, "The Impact of the National School Lunch Program on Child Health: A Nonparametric Bounds Analysis," for example, importantly finds that the NSLP reduces the prevalence of food insecurity by at least 3.8%, the rate of poor health by at least 29%, and the rate of obesity by at least 17%.<sup>18</sup> Arteaga and Heflin's study similarly analyzes the impact of the NSLP on food insecurity. Looking specifically at the kindergarten transition period, they conclude that for low-income families, "paying full price for school lunch is associated with increases in food insecurity."<sup>19</sup> It is further worth noting that the NSLP lifted an estimated 1.2 million people out of poverty in 2017.<sup>20</sup>

Another line of research looks more specifically at the nutritional impact of the NSLP. Results are fairly positive. Fox and Clark, for example, while finding that school meal programs are associated with an increased prevalence of sodium, nonetheless concluded that "school meal program participation was associated with reduced prevalence of nutrient inadequacy."<sup>21</sup> Vernarelli and O'Brien's "A Vote for School Lunches" similarly offers support for the nutrition benefits of the NSLP. Using the National Health and Nutrition Examination Survey to compare program participants with similar non-participants, Vernarelli and O'Brien find that "Children who were eligible for no-cost school lunch, but did not participate in the NSLP consumed approximately 60% more energy, 58% more total fat, 60% more saturated fat, 50% more solid fat, 61% more sodium, double the amount of added sugars and less than half the amount of fruit than NSLP participants (all  $p < 0.001$ )."<sup>22</sup> Condon et al's study finds similar results.<sup>23</sup>

In the long-term, a 2010 study by Peter Hinrichs found that participation in the National School Lunch Program had sizeable effects on educational attainment.<sup>24</sup> A study on the Swedish School Lunch Program, while an imperfect comparison, offers further insight into the potential long-term effects of national school lunch programs. Finding that participants in the program have 3 percent greater life-time earnings, Alex-Petersen et al and their study on the long-term effects of childhood nutrition offers another piece of support for the national school lunch program.<sup>25</sup>

## *THE NEED: WHY SCHOOL BREAKFAST?*

It should come as no surprise that breakfast is widely considered the most important meal of the day: Indeed, the mantra has been more or less ingrained in us since birth, and for good reason. A long list of researchers has documented the importance of breakfast in determining health and educational outcomes. In a study of nearly 700 students, Ptomey et al, for example, determined that breakfast consumers had statistically significant higher test scores than non-breakfast consumers.<sup>26</sup> The study, "Fasting and Cognition in Well- and Undernourished Schoolchildren" offers further support for Ptomey et al's conclusion, noting that the consequences of an overnight and morning fast include increased errors and slower memory recall.<sup>27</sup>

Meanwhile, Deshmukh et al's study, "The Relationship of Breakfast Skipping and Type of Breakfast Consumption with Nutrient Intake and Weight Status in Children and Adolescents"

has established the importance of breakfast in combatting the obesity epidemic. Their review of the National Health and Nutrition Examination Survey revealed that the prevalence of obesity is higher among breakfast skippers than cereal consumers.<sup>28</sup> A literature review conducted by Rampersaud et al offers further support for this conclusion. After summarizing the results of 47 studies centered on breakfast, Rampersaud and his colleagues concluded that “children who reported eating breakfast on a consistent basis tended to have superior nutritional profiles than their breakfast skipping peers.”<sup>29</sup>

Though breakfast skipping runs rampant across the country, low-income and minority communities are particularly affected by this problem. In a survey conducted by No Kid Hungry, 59% of children from low-income families reported coming to school hungry, causing teachers to spend, on average, \$300 a year on food for their students.<sup>30</sup> Unsurprisingly then, a study by Judith Bartfeld and Jeong-Hee Ryu on breakfast skipping in Wisconsin revealed that breakfast-skipping is “most common among children of low socioeconomic status.”<sup>31</sup> Furthermore, as reported by Charles Basch’s 2011 study on the achievement gap, “skipping breakfast is highly and disproportionately prevalent among school-aged urban minority youth.”<sup>32</sup>

#### *SBP PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: The School Breakfast program was piloted in 1966 as a categorical grant program to assist higher-need schools.<sup>33</sup> In its first official year, the SBP cost the federal government \$573,000 to serve 88,000 children.<sup>34</sup> Following minor modifications in 1971, the federal government implemented more sweeping changes in 1973 by switching the program from a categorical grant to a more appropriate reimbursement structure.<sup>35</sup> Two years later, in 1975, the School Breakfast Program received permanent authorization.

In response in part to the rising obesity epidemic, meal patterns were updated in 2010 under the Healthy, Hunger-Free Kids Act to better align the nutritional value of the program with the 2010 Dietary Guidelines for Americans.

Operation: The School Breakfast Program functions very similarly to the National School Lunch Program. Just as in the NSLP, all school breakfasts at participating schools are partially subsidized by the federal government, though the extent to which a meal is reimbursed and the actual price the child pays for it varies. Children whose household income falls at or below 130% of the federal poverty line are eligible for a free meal, children whose household income falls between 130% and 185% of the federal poverty line are eligible for a reduced price meal, and children whose household income is greater than 185% of the federal poverty line are eligible for the smaller paid rate reimbursement.<sup>36</sup> Similar to the NSLP, a child’s eligibility can be determined through either a direct certification or a household application. Schools also have the option to offer free meals through CEP or Provision 2. For the 2018 – 2019 school year, reimbursement rates are as follows:<sup>37</sup>

School Breakfast Program			
	Non-Severe Need	Severe Need	Price of Meals to Children
Free	\$1.79	\$2.14	\$0
Reduced Price	\$1.49	\$1.84	\$0.30 (max)
Paid	\$0.31	\$0.31	Varies

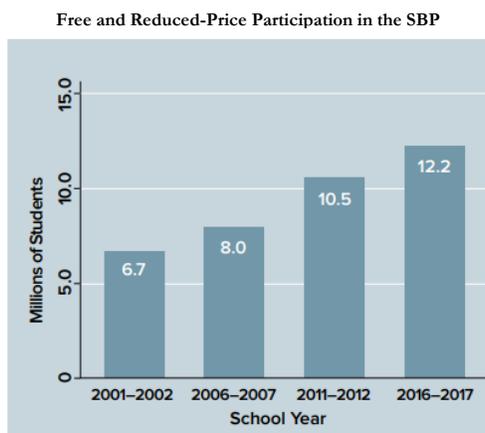
Source: "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs," Food Research and Action Center

It's worth noting that unlike the National School Lunch Program, which provides an additional reimbursement for schools serving 60% or more of their lunches at a free or reduced price rate, the School Breakfast Program, offers an additional reimbursement for schools serving 40% or more of their breakfast at a free or reduced price rate (noted above as a severe need school).

In a traditional breakfast program, school breakfasts are served before the start of the school day in the cafeteria. However, in an attempt to increase participation, schools have increasingly moved away from more traditional models and begun serving "breakfast after the bell." The most common alternative models are:<sup>38</sup>

- Grab & Go Breakfast – Students pick up breakfast from serving carts or kiosks located throughout the school
- Second Chance Breakfast – A traditional cafeteria breakfast that occurs during the school day (as opposed to before), often during a morning break
- Breakfast in the Classroom – Breakfast is served at a student's desk for a 10-15-minute time period, either during a break or while teachers provide instructional learning

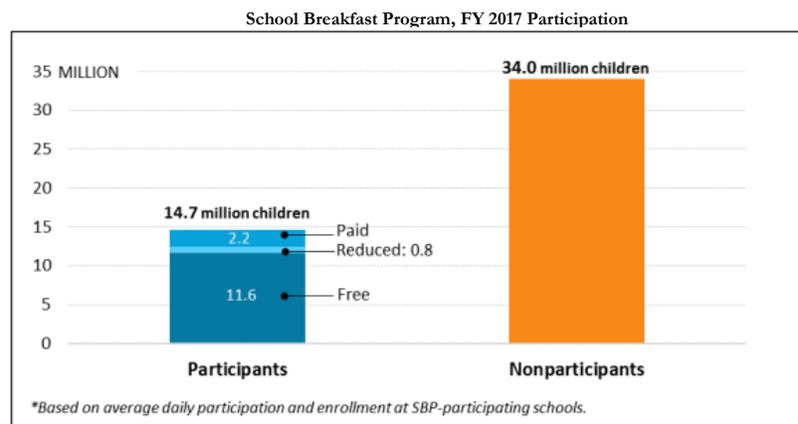
**Capacity:** Participation in the School Breakfast Program has increased rapidly since its inception, nearly doubling in size from the early 2000s.<sup>39</sup>



Philbin, Etienne, and Randy Rosso. "School Breakfast Scorecard: School Year 2016-2017."

In FY 2017, the federal government subsidized over 2.4 billion breakfasts in over 88,000 participating schools through the School Breakfast Program, costing the federal government roughly 4.3 billion dollars.<sup>40</sup> On a daily basis, roughly 14.7 million children ate a school breakfast each day (versus 30 million who ate a school lunch).<sup>41</sup> Relative to the national school lunch program, participants in the SBP are disproportionately low-income, with only 2.2 million

children receiving a school breakfast at the paid rate compared to 8.1 million children receiving a school lunch.<sup>42</sup>



*Source: Aussenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."*

### *SBP EVIDENCE OF EFFECTIVENESS*

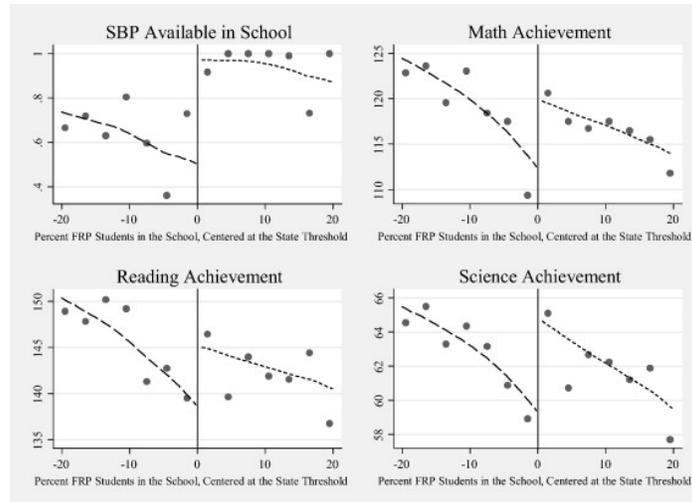
Since its inception, the School Breakfast Program has proven to be highly effective. First, the SBP is critical in improving the diets and health of participants. In an evaluation of school meal programs, for example, Philip Gleason and Allison Hedley Dodd found school breakfast participation to be associated with significantly lower BMI.<sup>43</sup> Likewise, Millimet and Tchernis' evaluation of the SBP revealed "evidence of a beneficial casual effect of SBP participation on childhood obesity."<sup>44</sup>

The SBP is also crucial to reducing food insecurity. The work of Judi Bartfeld, for example, has established that the availability of the school breakfast program is "linked to a lower probability of marginal food security among low-income children."<sup>45</sup> Jason Fletcher and David Frisvold's "The Relationship between the School Breakfast Program and Food Insecurity" offers further support for this assertion. Utilizing a difference-in-difference model to compare food insecurity rates with differing state policies, Fletcher and Frisvold conclude that "access to the SBP reduces the likelihood of indicating low food security by over 15 percentage points."<sup>46</sup> Interestingly, Bhattacharya et al also find that the impact of the SBP extends beyond participants to the entire household. They find that "in households with school-aged children, both preschool children and adults have healthier diets and consume less fat when the SBP is available."<sup>47</sup> This suggests that the SBP may have far-reaching consequences in its ability to reduce food insecurity.

Finally, extensive research on the cognitive and educational effects of the SBP further support the importance of the program. As demonstrated by a No Kid Hungry study, students who eat school breakfast have been shown to achieve 17.5% higher scores on standardized math tests and attend 1.5 more days of school per year.<sup>48</sup> Murphy et al similarly find increases in math grades. They also note that students who increased their participation in SBP had statistically significantly decreased rates of school absences, tardiness, and psychosocial problems.<sup>49</sup> Meanwhile, Frisvold's "Nutrition and Cognitive Achievement: An evaluation of the School

Breakfast Program,” offers support for state mandates that require schools to offer breakfast, finding these mandates to increase math and reading achievement as demonstrated below:<sup>50</sup>

Participation in SBP, Math Achievement, Reading Achievement, and Science Achievement by the Percent of Free and Reduced-Price Eligible Students



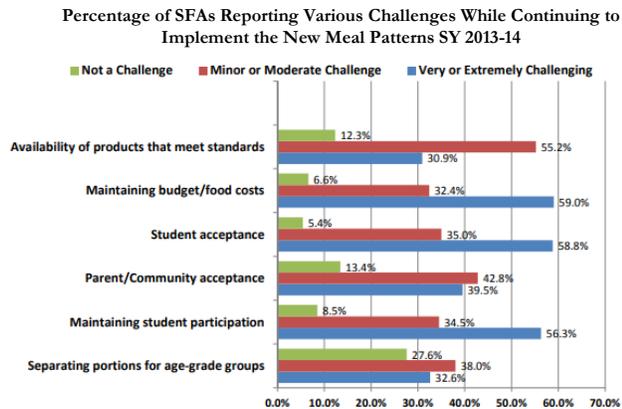
Source: Frisvold, David. "Nutrition and Cognitive Achievement: An Evaluation of the School Breakfast Program"

### SUGGESTED PROGRAM IMPROVEMENTS

As the evidence indicates, today, the National School Lunch Program and School Breakfast Program are highly effective in providing access to healthy foods for children across the country. There still remains, however, much room for improvement. The following suggestions have been made to improve the NSLP and SBP:

#### ➤ Raise reimbursement rates for breakfast and lunch

- Though the HHFKA significantly enhanced the nutritional quality of school meals it also placed a financial strain on schools. At present, schools acting in compliance with HHFKA standards are granted an additional six cents per meal. While not insignificant, this additional six cents pales in comparison to the costs schools see on the ground. In 2006, pre HHFKA, the USDA found a \$0.40 cent gap in reimbursement rates and lunch costs and reported that SFA revenues covered just 82% of school breakfast costs.<sup>51</sup> Nearly ten years later, in FY 2015, the USDA estimated that an additional \$0.27 per breakfast and an additional \$0.10 per lunch was warranted due to increased financial pressures



Source: Murdoch, Jim, Angela Campbell, Elizabeth Condon, Mary Kay Fox, Roderick Harrison, Morgan Miller, Katherine Niland, and Yiqi Shen. "Special Nutrition Program Operations Study, School Year 2013-14."

caused by the HHFKA.<sup>52</sup> And, as evidenced in the chart above,<sup>53</sup> a startling 60% of schools reported that maintaining their budgets/food costs post HHFKA was very or extremely challenging. Subsequently, reimbursement rates should be raised by at least \$0.10. According to the Congressional Budget Office, this would cost \$10 billion dollars over a nine-year period (estimated from 2016-2025), increasing federal funding by 4% for both breakfast and lunch.<sup>54</sup>

#### Insights from the Field:

“I do think the reimbursement rates should be higher. Schools are often working with very limited funding to run their meal programs. An increase in the reimbursement rate would help bridge the gap of rising food costs as well as provide adequate funding for districts to meet meal pattern regulations that ensure students are getting balanced, nutritious school meals.” – *Chef Sam Icklan, Director of Chefs in Schools*

- **Eliminate reduced-price fees, effectively providing free meals to all kids under 185% of the federal poverty line**

#### Insights from the Field:

“Eliminating the reduced price option would have a huge impact. Students who qualify for reduced-price meals often don’t qualify for other programs and are really at risk as a result because they fall into this grey area in terms of accessing services. Plus, the number of students who qualify for reduced price meals is relatively small. The cost of implementing this change probably wouldn’t be that much but it could make a *huge* difference.” – *Chef Sam Icklan, Director of Chefs in Schools*

“There just isn’t that much of a difference between those students who are receiving free meals and those who are receiving reduced price ones.” - *Krissy Scommegna, Child Nutrition Outreach Coordinator for Eastern Massachusetts*

- For low-income families, reduced price fees constitute a considerable expense and may lead to lower participation rates, particularly for breakfast which reaches a mere 56.7% of children who participate in the NSLP. By reimbursing families whose household income falls between 130-185% of the FPL at the free rate, the federal government could help school meals reach more children and even help ameliorate school meal debt in the process. This change, for both breakfast and lunch, has been estimated to increase federal spending by \$6 billion from 2016-2025.<sup>55</sup> A 2009

Government Accountability study identified 5 states and 35 additional school districts which have eliminated the reduced price category. SFA officials indicated that eliminating the reduced price fees helped increase lunch participation by 11 percentage points and breakfast participation by 9 percentage points.<sup>56</sup>

- **Continue to support the expansion of CEP by expanding direct certification to Medicaid, the Low Income Home Energy Assistance Program (LIHEAP), and programs in the Department of Housing and Urban Development (HUD)**

- CEP schools experience greater participation in the NSLP and SBP, with a USDA study finding a 5.2% increase in lunch participation and a 9.4% increase in breakfast.<sup>57</sup> Yet despite these benefits, CEP remains underutilized. To help more school districts reap the benefits of CEP, and feed more children, Congress should authorize a policy solution which would expand direct certification. More

CEP Take-Up by School's ISP for SY 2016-2017

Identified Student Percentage	Eligible Schools	Adopting Schools	Percent Adopting CEP
40 — less than 50 percent	10,567	2,188	20.7%
50 — less than 60 percent	10,491	6,027	57.5%
60 percent and above	16,736	12,418	74.2%

Source: Hewins, Rosso, and Maruice, "Community Eligibility Continues to Grow in the 2016-2017 School Year."

specifically, they should direct states to expand direct certification to Medicaid, LIHEAP, and HUD. In a 2013-2014 Medicaid Demonstration pilot, "DC-M increased the percentage of students directly certified to receive free meals by 6.9 percentage points in New York City." Moreover, "DC-M had a positive impact on the percentage of lunches served for free in two of the four random-

#### Insights from the Field:

"Anything that you can do to offer kids food that's free is so important... Having school meals available for all students really helps break down the stigma that's associated with school meals." – *Krissy Scommegna, Child Nutrition Outreach Coordinator for Eastern Massachusetts*

"[CEP] has made a huge difference for schools, allowing them to improve their programs [and] to increase access to all students, and removes stigma as well. It kind of normalizes the school breakfast for the whole school." – *Rosemarie Caward, Senior Outreach Coordinator*

assignment States (Massachusetts +1.1 and New York State +1.5 percentage points)" and "a positive impact ... on the percentage of breakfasts served for free in three of the States (Florida +1.9, New York City [which was considered its own state for the purposes of this study] +3.7, and New York State +1.6 percentage points)."<sup>58</sup> Costs in year 1 for implementation were roughly \$322,000 across the five states, with costs in year 2 ranging from \$8,000 to \$78,000.<sup>59</sup> Unfortunately, no states have expanded direct certification to LIHEAP or HUD, but a USDA study has noted that such an expansion would be feasible.<sup>60</sup> Given the close ties between heating, housing, and food insecurity, expanding direct certification to these programs seems like a natural fit.

#### ➤ Return to the Healthy, Hunger-Free Kids Act nutrition standards established in 2010

- The nutrition standards set in the Healthy, Hunger-Free Kids act have been vital in combatting obesity and ensuring that students have access to nutritious school meals. As a wide range of literature has established, by altering the nutrition standards for the first time in fifteen years, the HHFKA represented a clear

#### Insights from the Field:

"I think that the sodium and whole grain regulations are important, there are kids now who are just so used to it. We've spent all this time getting kids to a point where they expect this as part of their meals. I think [the rollbacks] are confusing. We've got something that's working so starting to reconfigure it seems unnecessary to me." – *Chef Sam Icklan, Director of Chefs in Schools*

commitment to ensuring a healthier America.<sup>61</sup> However, recent rollbacks on the whole grain requirements and sodium requirements have posed a threat to students seeking access to nutritious school meals.<sup>62</sup> To continue effectively fighting the obesity epidemic, which costs America \$14 billion dollars each year, nutrition standards should be reverted to the ones originally established in the HHFKA.

➤ **Offer funding for plate waste education and reduction in schools**

➤ Every year, the U.S. wastes approximately 62.5 million tons of food, costing the country \$218 billion each year.<sup>63</sup> With a host of studies identifying the copious amounts of plate waste the Breakfast Program produces, it's clear that schools unfortunately play a role in this waste.<sup>64</sup> In particular, advocates have been concerned with the 45% amount of milk offered that is wasted.<sup>65</sup> But if schools are part of the problem, they can also play a major part in the solution. Schools could function as educators on the detrimental effects of plate waste. They could also implement more rigorous food waste reduction practices.<sup>66</sup> While highly important, these strategies would, unfortunately, require upfront funding. Given the immense financial pressure school nutrition departments face, additional funding might be warranted to encourage more schools to vigorously attack the plate waste epidemic.

**Challenges of SBP as Identified by Teachers**

Food waste	168	45.8
Not enough time for students to eat	125	33.9
Increased supervision needs provided by teachers/staff	115	31.2
Takes time away from the school day	96	26.0
Social stigma of those who eat breakfast at school	83	22.5
Unsure	53	14.4
There are no benefits to school breakfast programs	37	10.0
Misaligned bus schedule	33	8.9
School scheduling conflicts	26	7.0
Students have to wait in cafeteria lines	16	4.3
Other	13	3.5

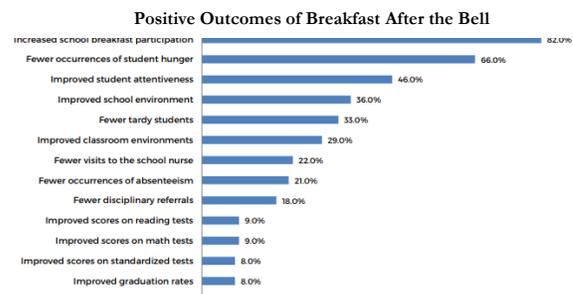
*Source: Krueger, Eggett, and Stokes, "Teacher Perceptions and Preferences for 5 School Breakfast Program Models."*

➤ **Expand Farm to School Program**

➤ In 2018, 42% of school districts in the US were being reached by the Farm to School Program, a sizeable number, but one that should grow in the next few years. In order to encourage growth, the USDA should lower the grant's floor from \$15,000 to \$5,000.<sup>67</sup> Additionally, at present, the USDA solely allows schools to apply for a grant from September to December. A longer application window would certainly help expand the program as well.<sup>68</sup> It is worth noting that the USDA estimated the Farm to School Program generated over \$1 billion dollars in economic activity in 2015.<sup>69</sup> Expanding such an economically viable program thus has the potential to both enhance healthy school meals and grow the local economy.

➤ **For the SBP: Provide grants for start-up costs to schools hoping to install an alternative breakfast model**

➤ The federal government should encourage the implementation of alternative breakfast models by offering grants for start-up costs. Breakfast after the bell programs such as Second Chance Breakfasts, Grab & Go Breakfast and Breakfast in the Classroom have estimated participation rates of 40%, 60%, and 80% respectively (compared to



*Source: Sanderson et al., "School Breakfast After the Bell: Equipping Students for Academic Success."*

the traditional breakfast participation rate of 35%).<sup>70</sup> Moreover, in a survey of participating principals, conducted by FRAC in 2015, a wide range of benefits of Breakfast After the Bell was noted (as evidenced in the chart above).<sup>71</sup> Yet, as a variety of advocates have reported, start-up costs present a significant challenge for schools who may wish to participate.<sup>72</sup> For example, off-site locations may need refrigeration units (\$2,758), serving carts (\$474), or additional thermal crates for transportation.<sup>73</sup> Given the potentially high price tag during initial program implementation, yet immense benefit over the long-term, it would be wise for the federal government to offer support for schools in the initial start-up phase.

**Insights from the Field:**

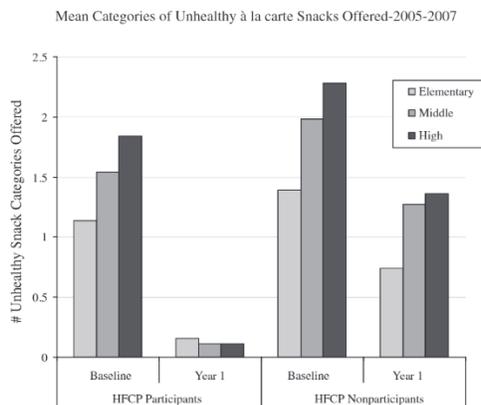
“Alternative breakfast models are so important because they make it so that it’s not a choice for the kids between spending time with their friends and eating breakfast, it fits it into the rest of the school day. With alternative breakfast models, it’s not so much of an either/or but just a part of their routine.”  
 – *Holly Grace, Child Food Security Specialist*

“Once a school implements one of these [alternative] models, usually the reimbursements make it sustainable but it’s those upfront costs of setting it up and establishing it that schools don’t have the money for.” – *Rosemarie Coward, Senior Outreach Coordinator*

### NSLP BEST PRACTICES FROM OTHER STATES

States experimenting across the country have also generated a substantial number of potential improvements worth considering. Connecticut, for example, offers an additional \$0.10 cent reimbursement for all schools who meet the state’s nutrition standards.<sup>74</sup> In its first year, the state saw a significant decrease in unhealthy competitive foods and an increase in NSLP participation. Most importantly, participation in the Healthy Food Certification was related to a significantly greater decline in unhealthy foods in elementary and high schools.<sup>75</sup>

Mean Number of Categories of Unhealthy à la Carte Snacks Offered in Connecticut Schools



Source: Long, Michael W., Kathryn E. Henderson, and Marlene B. Schwartz; “Evaluating the Impact of a Connecticut Program to Reduce Availability of Unhealthy Competitive Food in Schools.”

Meanwhile, in New Jersey, the state legislature has made significant steps in expanding participation in the Community Eligibility Participation. NJ S1895 requires “Every school district in which there is at least one school that qualifies for the Community Eligibility Provision, but is not implementing it,” to report their reasons for nonparticipation to the Department of Agriculture and the Department of Education.<sup>76</sup> A relatively recent bill, the potential impact of NJ S1895 is still unknown. However, there is good reason to believe that the availability of free meals will increase in NJ by exerting pressure on schools to enroll in CEP.

New York City has also made significant progress in offering universal free meals (UFM), with 400 NYC public schools utilizing Provision 2 to implement UFM. In a 2017 study of NYC middle schools, Schwartz and Rothbart found “UFM increases academic performance by as much as 0.059 standard deviations in math and 0.083 in ELA for non-poor students, with smaller, statistically significant effects of 0.032 and 0.027 standard deviations in math and ELA for poor students.”<sup>77</sup> URM also has the potential to reduce stigma, as UFM was found to “increase participation in school lunch by roughly 11.0 percentage points for non-poor students and 5.4 percentage points for poor students.”<sup>78</sup>

An additional five states have done their part to reduce school meal shaming through legislation. New York’s No Student Goes Hungry Initiative, California’s Child Hunger Prevention and Fair Treatment Act, Oregon’s An Act Relative to School Meals, West Virginia’s Standards for School Nutrition Policy, and New Mexico’s Hunger Free Student Bill of Rights may all serve as models for other states across the country.<sup>79</sup>

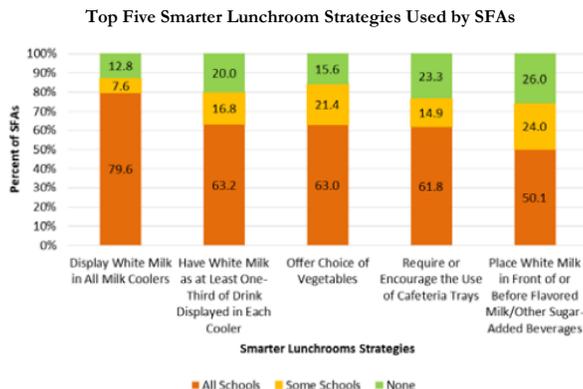
Finally, an analysis of San Francisco’s 2009-2010 pilot, which removed competitive a la carte foods from school cafeterias, offers support for a reduction in competitive foods. Across three studied middle and high schools, researchers found that “for students who qualified for free lunches, increases in the percentages of participating students were 13% at Francisco Middle School, 41% at Lowell High School, and 73% at Balboa High School. Among students who qualified for reduced-price meals, participation increased by 23%, 38%, and 154%, respectively, at the 3 sites.”<sup>80</sup>

#### *Sidebar: Other Best Practices*

An emerging field of behavioral economics has centered around the smarter lunchroom movement. Among a long list of others, the following best-practices have been identified:<sup>81</sup>

- Offering vegetables in two locations can result in students taking up to 40% more
- Holding recess before lunch can increase vegetable and fruit consumption by 54%
- Moving fruit from a stainless steel tray to a colorful fruit bowl can double sales
- Giving healthy food choices fun, descriptive names – for example calling green beans “supercharged green beans” – can increase consumption by over 30%
- Offering sliced fruit can increase student consumption by over 70%
- Suggesting students take a fruit can increase the number of students eating (not just taking) a fruit by as much as 70%

SFA’s have increasingly paid more attention to these strategies. In fact, in SY 2013-14, over 80 percent of SFA’s reported they implemented at least one strategy, with the following strategies being the most popular:<sup>82</sup>



*Source: Murdoch et al., "Special Nutrition Program Operations Study, School Year 2013-14."*

For a more comprehensive overview of successful smarter lunchroom strategies please see “Smarter Lunchrooms Scorecard Literature Review” from the Smarter Lunchrooms Movement at Cornell University.<sup>83</sup>

Finally, in a related field of research, nutritionists have begun studying a link between the length of lunch and consumption. As highlighted by a study by Bergamn, for example, “elementary school students who were given 30 minutes for lunch consumed more foods with nutrients such as calcium and vitamin A, than did those with a 20- minute lunch period.”<sup>84</sup> A plate waste study by Cohen et al similarly found that “students with fewer than 20 minutes to eat consumed 13% less of their entrée ( $p < 0.0001$ ), 10% less of their milk ( $p < 0.0001$ ), and 12% less of their vegetable ( $p = 0.0002$ ) compared to when students had at least 25 minutes to eat.”<sup>85</sup>

At the local school level, these best-practices most certainly could improve the national school lunch program.

### *SBP BEST PRACTICES FROM OTHER STATES*

At the state level, nutrition advocates have also implemented a variety of innovations to better their school breakfast programs – particularly in the alternative breakfast model realm. Six states, for example, including Arkansas, California, Maryland, Pennsylvania, Tennessee, and Virginia have authorized supplemental funding for breakfast after the bell programs since 2013.<sup>86</sup> Interestingly, in Virginia, supplemental funding comes in the form of an additional \$0.05 for each breakfast served using an alternative model.<sup>87</sup>

Other states have tried to encourage their schools to implement a Breakfast in the Classroom model by issuing memos and legislation which makes it known that breakfast time can still count as instructional time so long as some education related activity is also taking place while students eat.<sup>88</sup> States implementing such a policy include California, Colorado, Indiana, Massachusetts, Michigan, Oregon, and Pennsylvania.<sup>89</sup>

Most impactful have been the states mandating some form of alternative model in higher-need schools. New Mexico requires all schools which serve 85% or more free or reduced price

students to implement an alternative breakfast model. Meanwhile, Colorado, Illinois, Nevada, New Jersey, New York, and Washington State have mandated alternative models in all schools which have 70% or more of students receiving free or reduced price meals. The state of Delaware has mandated that all CEP participating schools offer an alternative model, while Washington D.C. mandates alternative models in schools serving 40% free or reduced price students.<sup>90</sup> Finally, in West Virginia, since 2015 all schools have been mandated to offer breakfast after the bell, leading to a top breakfast participation rate of 85.3% in SY2016-17.<sup>91</sup>

Evaluations of these states' breakfast programs have offered overwhelming support for Breakfast After the Bell programs. In Maryland, for example, where state funds have been invested in BAB, participating schools have had as much as a 7.2% lower rate of chronic absenteeism and have seen students be 12.5% more likely to achieve proficiency on math tests.<sup>92</sup> School breakfast participation has risen across all states mandating BAB in higher-need schools and schools have seen better performance on various indicators: In an assessment of Denver Public Schools, for example, breakfast in the classroom has had positive influences on office referrals and chronic absenteeism.<sup>93</sup>

Additionally, multiple states have eliminated reduced price fees for breakfast. According to a fact sheet by the School Nutrition Association, these states include Colorado, Maine, Maryland, Minnesota, North Dakota, North Carolina, Oregon, Vermont, and Washington State.<sup>94</sup>

Finally, school districts such as New York City Public Schools have gone even further by implementing universal free breakfast. By raising the price of paid school lunches, officials were able to implement this change at zero cost, yet the policy resulted in small increases in breakfast participation across the spectrum.<sup>95</sup>

## **FRESH FRUIT AND VEGETABLE PROGRAM**

### *THE NEED: WHY FRESH FRUIT AND VEGETABLE PROGRAM*

The importance of fruits and vegetables in a child's diet has been well established by nutritionists and doctors alike. To put it succinctly, fruits and vegetables contain many important nutrients that kids lack such as calcium, potassium, fiber, magnesium, and vitamin E.<sup>96</sup> Fruits and vegetables also offer disease prevention and help maintain healthier weights.<sup>97</sup> However, studies indicate that children are not consuming nearly the amounts of fruits and vegetables they should be: As documented by Neumark-Sztainer et al in "Overweight Status and Eating Patterns Among Adolescents: Where do Youths Stand in Comparison with the Healthy People 2010 Objectives?" youths are regularly consuming less than the recommended amounts of fruits and vegetables.<sup>98</sup>

Unfortunately, Neumark-Sztainer also discovered that "there were large sociodemographic disparities in obesity and eating patterns, particularly across race/ethnicity and socioeconomic status."<sup>99</sup> Lorson et al's study, "Correlates of Fruit and Vegetables Intakes in US Children" further supports this conclusion as they found fruit intake to be greater in higher income households.<sup>100</sup>

### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

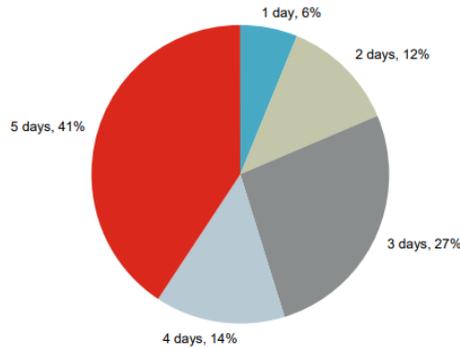
History: The Fresh Fruit and Vegetable Program (FFVP) was first piloted in 2002 in 4 states and 1 Indian Tribal Organization under the Farm Security and Rural Investment Act of 2002.<sup>101</sup> Two years later, the Child Nutrition and WIC Reauthorization Act of 2004 authorized the pilot in four more states and in a small number of schools in South Dakota and Arizona.<sup>102</sup> In 2006, an additional 6 states were authorized. Finally, the 2008 Farm Bill amended the National School Lunch Act to expand the FFVP nationwide,<sup>103</sup> as Congress authorized 40 million dollars for the program in its first official year.<sup>104</sup>

Operation: Each year, the USDA allocates a certain dollar figure to the states and the District of Columbia to implement the FFVP. State agencies then distribute funds to participating elementary schools based on state funding capacity and student enrollment.<sup>105</sup> Schools receive \$50 to \$75 dollars per student per school year, submitting monthly reimbursement claims for the cost of all fresh fruits and vegetables as well as limited non-food costs.<sup>106</sup>

Though all elementary schools who participate in the NSLP are potentially eligible to participate in the FFVP, schools with high percentages of free and reduced price students are prioritized.<sup>107</sup> Schools are required to widely publicize the program, encouraged to serve produce at least two times a week, and are forbidden from serving the produce during the NSLP and SBP program times.<sup>108</sup> Otherwise, program implementation is up to the school.

Unsurprisingly then, program implementation varies widely from school to school. As demonstrated below, most schools (55%) offer an FFVP snack four or five days a week, with only 6% of schools offering a snack once a week.<sup>109</sup>

Number of Days FFVP Snacks Are Offered Each Week



Source: Bartlett et al., "Evaluation of the Fresh Fruit and Vegetable Program."

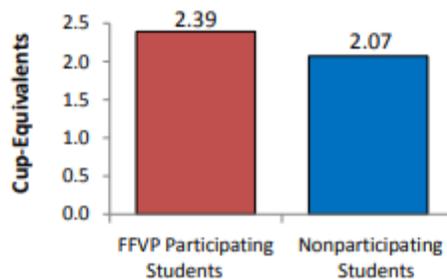
The USDA 2013 report further notes that apples (99% of schools) and carrots (92% of schools) were the most frequently served fruit and vegetable.<sup>110</sup>

Capacity: In fiscal year 2018, the Fresh Fruit and Vegetable Program was allocated \$174.5 million to be divided up among all 50 states and the District of Columbia.<sup>111</sup> According to the United Fresh Produce Association, the FFVP allows 7,6000 schools to serve 4 million low-income kids across the country.<sup>112</sup>

### EVIDENCE OF EFFECTIVENESS

In its short tenure, the Fresh Fruit and Vegetable Program has been shown to be highly effective. Unsurprisingly, a 2013 USDA evaluation of the program demonstrated that program participants ate more fruits and vegetables than corresponding nonparticipants.<sup>113</sup> In fact, "the results indicate that FFVP increased average fruit and vegetable consumption among students in participating schools on FFVP days by approximately one-third of a cup per day."<sup>114</sup>

Impact of FFVP on Daily Fruit and Vegetable Intake



Source: Bartlett et al., "Evaluation of the Fresh Fruit and Vegetable Program."

It is also interesting to note that FFVP schools offered nutrition education at statistically significantly higher rates.<sup>115</sup> As a result, it is possible that the effects of the FFVP may extend beyond the school day. In fact, a journal article from the Journal of the Academy of Nutrition and Dietetics suggests just that. Examining how the FFVP may alter out-of-school behavior, Ohri-Vachaspati et al found significant associations between "school FFVP participation and more requests for vegetables during shopping, higher scores on self-efficacy to choose vegetables at home, stronger preferences for vegetables, and more frequent consumption of fruit."<sup>116</sup>

Finally, looking more specifically at health benefits, Qian et al find that “FFVP participation can reduce BMI percentile by 4 percent, ceteris paribus.”<sup>117</sup> Concluding that the program has a high benefit-cost ratio, Qian et al suggest that the FFVP may play a crucial role in fighting the obesity epidemic.

With all the evidence in favor of the program, it should come as no surprise that in the USDA’s 2013 study, 85% of participating SFAS and other administrators were in favor of the FFVP and 97% of students reported wanting the program to continue.<sup>118</sup>

### *SUGGESTED PROGRAM IMPROVEMENTS*

Clearly, the benefits of the Fresh Fruit and Vegetable Program are immense. But room for improvement certainly exists.

- **Expand the Fresh Fruit and Vegetable Program to include middle and high schools**
  - At present, the FFVP is operating solely in elementary schools. Yet as an expanding area of research has illustrated, teen hunger is a significant problem in America.<sup>119</sup> And program pilots demonstrate that teenagers could benefit immensely from the Fresh Fruit and Vegetable Program. While a 2004-2005 pilot program which distributed free fruits and veggies in K-12 schools in Mississippi produced positive results across all grade levels, results were particularly strong for middle and high schoolers: Both eighth and tenth graders showed increased preferences for fruit and increased consumption of fruit.<sup>120</sup> Additionally, eighth graders “reported more positive attitudes towards eating fruit and vegetables, increased perceived self-efficacy to eat more fruit, and increased willingness to try new fruit.”<sup>121</sup> The demonstrable impact of this program, combined with its ability to reduce teen hunger, certainly seems to justify an expansion of the FFVP to middle and high schools.

### *BEST PRACTICES FROM OTHER STATES*

As a relatively newer program, little state variation exists as of 2018. However, the state of New Jersey has distinguished itself among its peer states by linking the FFVP with their Farm to School program. FFVP participating schools may receive additional funding if they agree to serve local produce.<sup>122</sup> To receive additional funding, schools must agree to serve local produce two days a month during September – November and April – June. In 2018, 79% of FFVP schools participated in this linked program.<sup>123</sup>

## **SPECIAL MILK PROGRAM**

### *THE NEED: WHY SPECIAL MILK PROGRAM*

A wide range of literature has established the importance of milk consumption on a variety of health measures. Utilizing NHANES data to analyze the relationship between milk consumption and height, for example, Andrew Wiley, showed that height was positively associated with milk consumption at ages 5-12 and 13-17.<sup>124</sup> Milk consumption is also particularly important for bone-strength as indicated by research conducted by Black et al<sup>125</sup> and Connie Weaver.<sup>126</sup>

Moreover, milk contains a variety of vital nutrients: Indeed, advocates are quick to note that “milk is America’s top food source of calcium, vitamin D, and potassium – three nutrients that are most often lacking in our diet.”<sup>127</sup> Calcium is particularly important: yet, unfortunately, “fewer than one in 10 girls and only one in four boys ages 9 to 13 [receive] their adequate intake of calcium”<sup>128</sup> It should come as no surprise then, that milk does indeed matter.

### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: The Special Milk program was created in 1954 and began operating in 1955 to increase milk consumption among children in schools.<sup>129</sup> In the Child Nutrition Act of 1966, the SMP was placed under the U.S. Department of Agriculture.<sup>130</sup> In 1971, when the SMP was permanently authorized, all schools could participate in the program. However, in 1982, drastic changes to the SMP were made under the Omnibus Reconciliation Act.<sup>131</sup> In limiting participation to schools which did not participate in other school meals programs and to private schools with tuition under \$1,500, the 1982 changes drastically reduced the size of the program. These restrictions were eased slightly in 1987 and again in 1988 by eliminating the tuition cap on private schools and allowing SMP participation in FANP institutions to those half-day students who were not receiving meals.<sup>132</sup>

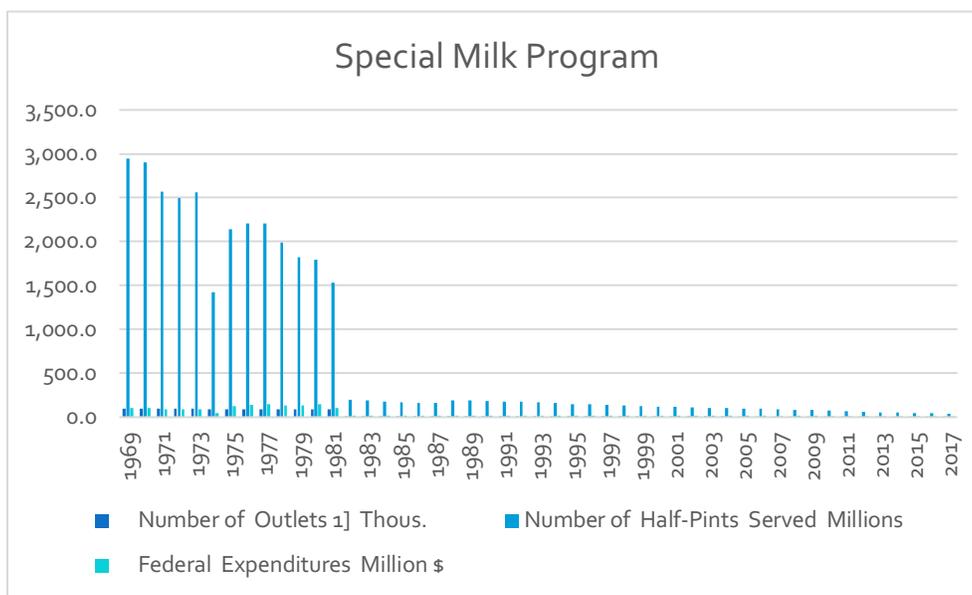
Operation: Today, the SMP operates primarily in schools, child care institutions, and camps that do not participate in other school meal programs (except, of course, for the exceptions noted above). Under SMP law, all milk served must be fat-free or low-fat (1%), follow state and local standards, and contain vitamins A and D at the levels required by the FDA.<sup>133</sup> Participating institutions may receive reimbursements based on the following rates for each half-pint of milk served:<sup>134</sup>

<b>Special Milk Program</b>			
	All Milk Served	Paid Milk	Free Milk to Low-Income Children
Schools that only sell milk	\$0.21	Not Applicable	Not Applicable
Schools that sell and provide free milk	Not Applicable	\$0.21	Average cost per half-pint of milk
Schools that provide only free milk	\$0.21	Not Applicable	Not Applicable

Source: Aussenberg and Billings, “School Meals Programs and Other USDA Child Nutrition Programs: A Primer.”

As noted above, children can receive milk at a free rate if their households' income falls below 130% of the federal poverty line.<sup>135</sup> Households must apply to qualify for the free rate each year. All other children receive milk at the paid (though still subsidized) rate.

Capacity: In Fiscal Year 2017, according to the Congressional Research Service, a mere 41 million half-pints were served.<sup>136</sup> 9.5% of those half-pints, or nearly 4 million half-pints, were subsidized at the free rate.<sup>137</sup> These figures pale in comparison to pre-1982 Omnibus Reconciliation Act numbers, as is evidenced by the chart below.<sup>138</sup>



Source: Chart generated using data from "Child Nutrition Tables," Food and Nutrition Service

Federal expenditures for FY2017 totaled \$8.3 million for the SMP.<sup>139</sup>

### EVIDENCE OF EFFECTIVENESS

As a smaller component of the Child Nutrition Programs, the SMP has received relatively little research attention from the federal government and private researchers. However, as stated by Fox et al, "available data indicate that the SMP contributes to increased nutrient intake, particularly among children from low-income families and elementary school children."<sup>140</sup> Two studies in particular support this assertion. Robinson's 1975 study, for example, indicated that free milk eligible children at SMP schools drank 77 percent more milk at school than corresponding ineligible children.<sup>141</sup> This resulted in an overall increase of 12% in milk consumption.<sup>142</sup>

A slightly more recent study, the 1983 National Evaluation of School Nutrition Programs, conducted by Wellisch et al, also found positive effects of the SMP. Researching 6,556 students across 276 schools in 90 districts, Wellisch et al found that "the SMP significantly increased students' intakes of food energy, calcium, riboflavin, protein, magnesium, and vitamin B6."<sup>143</sup> They also importantly found that the SMP more prominently impacts low-income students, noting that in secondary schools "impacts for energy were related to family income."<sup>144</sup>

### *SUGGESTED PROGRAM IMPROVEMENTS*

- **Expand eligibility for free milk to include reduced-price students (i.e. expand eligibility for free milk from 130% to 185% of FPL)**
  - As noted above, unlike other school meals programs, which function on a three-tiered reimbursement structure, the Special Milk Program operates with only a free and paid category. Subsequently, students who would normally qualify for a reduced price meal (those living in households 130 – 185% of the FPL) are forced to pay the full price for milk. Spending one dollar per kid on milk each week adds up quite quickly for families with multiple children. As such, eligibility for free milk should be expanded to include students who fall between 130% and 185% of the federal poverty line.

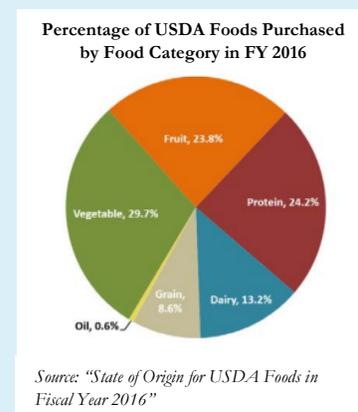
### *BEST PRACTICES FROM OTHER STATES*

On the state level, very few state governments or legislators have experimented with the Special Milk Program.

## SIDEBAR: USDA'S SCHOOLS/CHILD NUTRITION FOODS PROGRAMS

USDA Schools/Child Nutrition Foods Programs, commonly known as commodity foods or foods in schools, began in the 1930s during the Great Depression as the government attempted to help farmers nursing large surpluses and school children whose struggling families were finding it hard to put food on the table.<sup>145</sup> The commodity food system began expanding in the 1940s as the National School Lunch program took off. This year, in SY 2018 the USDA will distribute roughly \$1.3 billion dollars' worth of foods.<sup>146</sup>

Today, USDA foods are provided to the National School Lunch Program, the Child and Adult Care Food Program, and the Summer Food Service Program. Commodity foods are not allocated for the School Breakfast Program though schools may choose to use their foods for breakfast. Each year, the USDA publishes the foods available for schools and participating institutions to request.<sup>147</sup> Though states are offered a wide range of choices to distribute to their participating schools and institutions, vegetables, proteins, and fruits are the most purchased foods by the USDA as the chart above demonstrates:<sup>148</sup>



Each year, schools participating in the NSLP receive an allotment of "entitlement foods" – a number calculated based on the number of school lunches served in the prior year. This figure is then multiplied by a per meal rate which is adjusted annually for inflation. Additionally, the published per meal rate is then altered such that "total USDA Foods assistance equal[s] at least 12% of all cash and USDA Food Assistance provided by USDA."<sup>149</sup> The resulting effective rate per lunch in SY 2018 was \$0.3350 (up from \$0.3200 in SY 2017).<sup>150</sup> Though schools annual allotment is based solely on the number of lunches served, schools are able to use their commodity foods for breakfast as well.<sup>151</sup>

Institutions participating in the CACFP are also eligible to receive commodity foods, at a published rate of \$0.2325 per meal. Unlike most schools participating in the NSLP, however, CACFP institutions have the option of receiving USDA Foods or cash.<sup>152</sup> Finally, the FNS also distributes USDA Foods to SFSP sites, offering a \$0.15 rate per meal to those sites which prepare their meals on site.<sup>153</sup>

In addition to entitlement products, states and school districts may receive "products purchased by USDA to relieve agricultural market surpluses," also known as bonus products.<sup>154</sup> These products are distributed on a fair-share basis and may not be counted towards a State's entitlement.<sup>155</sup>

## PART 2: OUT-OF-SCHOOL TIME

### SUMMER FOOD SERVICE

#### *THE NEED: WHY SUMMER FOOD SERVICE*

During the school year, millions of low-income children across America rely on school breakfasts and lunches to provide crucial calories and curb hunger. But when school is out of session, the needs of these children don't go away. It follows naturally then, that a wide range of researchers has found higher rates of food insecurity in the summer.

As the July 2017 study, "It's a Cruel Summer: Household Responses to Reductions in Government Nutrition Assistance" by Lorenzo Almada and Ian McCarthy established, low-income households have a much harder time making ends meet in the summer. Forced to cope with limited nutrition assistance during the summer months, SNAP participating households increase the share of their household expenditures on food by 3%.<sup>156</sup> They continue to note that this increase amounts to less than \$2 per child per week (assuming a household size of 2-3 children).<sup>157</sup> In their words, "the small magnitude of this effect suggests that households cannot fully recover the cost of school meals from a reallocation in household budgets."<sup>158</sup> Low-income parents clearly struggle to provide school meal substitutes in the summer.

The work of Nord and Romnig supports this conclusion. In their report, "Hunger in the Summer: Seasonal Food Insecurity and the National School Lunch and Summer Food Service Program," Nord and Romnig's 7-year analysis indicates that the prevalence of food insecurity was 1.13 percentage points higher in August/September than in April.<sup>159</sup> A report from Huang et al further corroborates these findings.<sup>160</sup>

Furthermore, in a survey of low-income families produced by No Kid Hungry, 43% of low-income families indicated they find it harder to make ends meet during the summer and 32% reported that they sometimes find themselves without enough food during the summer months.<sup>161</sup> Additionally, 62% of survey participants reported spending more on food during the summer.<sup>162</sup> This increased spending forces many families into a tenuous trade-off, making families choose between essentials like medical care, utilities, and food.

#### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: Recognizing the need to serve low-income children nutritious foods throughout the entire year, rather than just over the school year, the Special Food Service Program was created in 1968 as a three-year pilot to provide meals over the summer and in child care. In 1975, the programs were separated and the Summer Food Service Program was officially authorized.<sup>163</sup> Over the next two decades, various alterations were made to reduce inefficiency and abuse and, like many other child nutrition programs, serious changes were also made in the 1996 Personal Responsibility and Work Opportunity Reconciliation Act.<sup>164</sup> Mild modifications were also made in the early 2000s. Unlike other child nutrition programs, however, no major changes were made

during the 2010 HHFKA, though the act did remove some limits on private nonprofit organizations.<sup>165</sup>

Operation:

Summer meals operate through two programs: The Summer Food Service Program and the NSLP Seamless Summer Option. Both programs are authorized by the federal government and administered by state agencies who typically delegate responsibility to sponsors and sites on the local level. The NSLP Seamless Summer Option was created in 2004 to more easily allow schools administering the NSLP and/or SBP to offer summer meals by streamlining paperwork.

Three different types of sites may be approved to operate the SFSP or the SSO: open sites, closed/enrolled sites, or camps. To receive meal reimbursements, open sites must be determined to be area eligible (i.e., 50% of children in the area must qualify for free or reduced price lunches). These determinations may be calculated using either school level data or census data. Once an open site is classified as area eligible, all meals served may be reimbursed at the free rate. At closed or enrolled sites, sites may be reimbursed at the free rate for all participants so long as at least 50% of enrollees qualify for free or reduced price meals. Finally, camps may also participate in summer meals, receiving reimbursements only for those children who normally qualify for free or reduced price meals.<sup>166</sup>

Most sites may offer breakfast, lunch, an AM or PM snack, or supper but the maximum amount of reimbursable meals is 2. Moreover, SFSP sites are restricted from receiving reimbursements for lunch and suppers served on the same day.<sup>167</sup>

Though SFSP sites and SSO sites function very similarly, they face different meal pattern requirements and reimbursement rates. Sites operating under the SSO face the same meal pattern requirements as the NSLP/SBP, whereas SFSP sites face slightly less restrictive requirements. SFSP sites also receive higher reimbursement rates than those operating under the SSO.<sup>168</sup>

For example, for the 2017 – 2018 school year, reimbursement rates were as follows:

Seamless Summer Option			
	Breakfast	Lunch	Snack
Free	\$2.09	\$3.31	\$0.88
Reduced	\$1.79	\$2.91	\$0.44
Paid	\$0.30	\$0.39	\$0.08

Summer Food Service Program			
	Breakfast	Lunch/Supper	Snack
Rural of Self Prep	\$2.2325	\$3.9225	\$0.9300
Other Sites	\$2.1900	\$3.8575	\$0.9100

*Source: "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs," Food Research and Action Center*

Capacity: In July of 2017, the average daily attendance rate across the country was 2,645,498. 152,211,319 total meals were served in FY 2017 across the country, resulting in \$423,764,777 federal dollars being spent.<sup>169</sup>

It's worth noting that more meals tend to be served through the SFSP than the SSO: According to the Government Accountability Office, in July of 2016, 70 million meals were provided by the SFSP compared to just 26 million meals served through the SSO.<sup>170</sup>

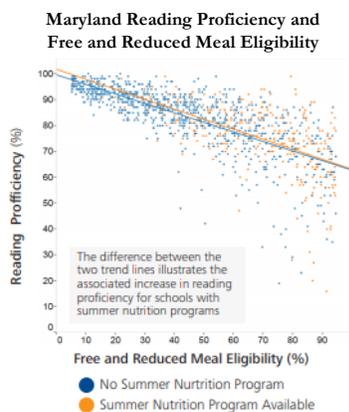
A joint survey by FRAC and Share our Strength provides insight into the different sponsors participating in SFSP and SSO. According to their 2014 survey, 56 percent of sites were schools, 23 percent nonprofits, 6 percent camps, 6 percent local governments, and 8 percent identified as other.<sup>171</sup> Furthermore, 45 percent of sponsors served 40 or more days, 34 percent served 26 to 29 days, 19 percent served 11 to 25 days, and 2 percent served 10 or fewer.<sup>172</sup> Finally, breakfast and lunch seemed to be the most popular options as 72 percent served breakfast, 8 percent served an AM snack, 94 percent served lunch, 21 percent served a PM snack, and 16 percent served dinner.<sup>173</sup>

Similar to during the school year, breakfast continues to be underutilized compared to lunch. As identified in the FRAC report, "Hunger Doesn't Take a Vacation: Summer Breakfast Status Report 2018," while 3 million children received lunch through one of the summer nutrition programs, just 1.6 million received breakfast in July of 2017.<sup>174</sup>

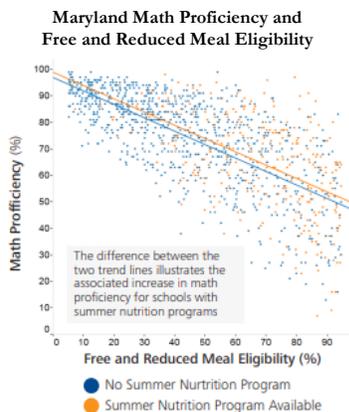
### EVIDENCE OF EFFECTIVENESS

The summer nutrition programs fill a crucial gap for low-income families. As determined by researcher, Daniel Miller, geographic accessibility to a summer meals site "was associated with a significantly lower probability of very low food security."<sup>175</sup> Nord and Romnig similarly found "the effect of the summer lunches provided by the NSLP and SFSP in moderating the summer-to-April differences in hunger prevalence [to be] considerable."<sup>176</sup>

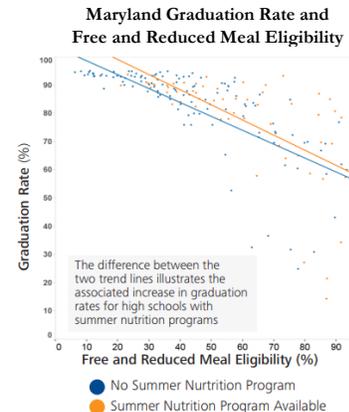
A Summer Nutrition Program Social Impact Analysis by Share Our Strength, Deloitte, and the Arby's Foundation offers further support for the summer meals programs. Analyzing school data from Maryland, researchers found that schools participating in summer nutrition programs "saw up to 2.5% or more students achieve math proficiency, up to 2% more students achieve reading proficiency and up to 5.3% more students graduate from high school" when compared with peer schools who did not offer such summer meals.<sup>177</sup>



Source: Orowecz et al "Summer Nutrition Program Social Impact Analysis"



Source: Orowecz et al "Summer Nutrition Program Social Impact Analysis"



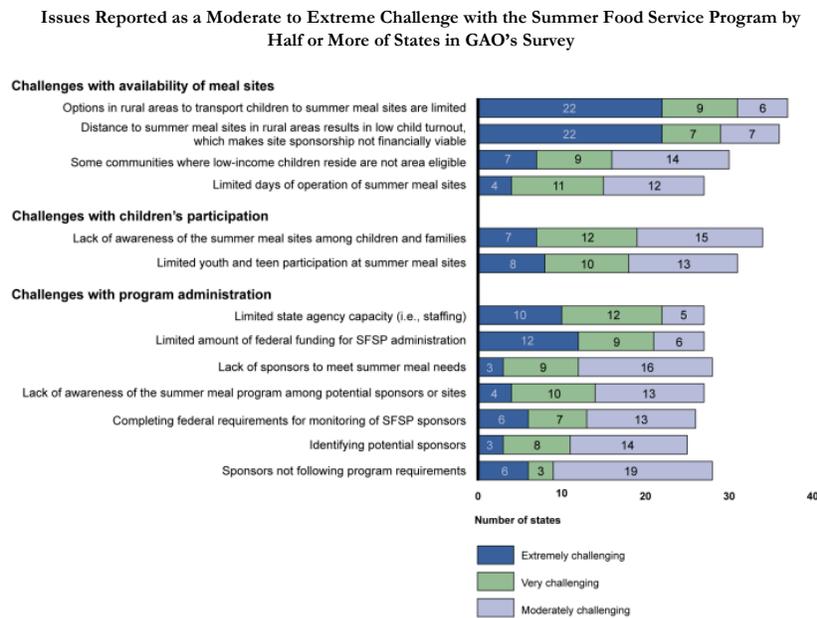
Source: Orowecz et al "Summer Nutrition Program Social Impact Analysis"

In a follow-up report, researchers concluded that if all children receiving free or reduced price meals during the school year were able to access them during the summer than as many as 1 million fewer children would be food insecure.<sup>178</sup> Additionally, our country would potentially see 22,800 fewer child hospitalizations, and 81,600 more high school graduates.<sup>179</sup>

While further research on the summer slide is necessary, given the vital importance of nutrition in cognitive development, there is good reason to believe that summer nutrition programs may also contribute to decreased summer learning loss.<sup>180</sup>

**SUGGESTED PROGRAM IMPROVEMENTS**

In a 2018 report from the Government Accountability Office, states identified the following challenges:



Source: GAO analysis of responses from its survey of state agencies responsible for administering the Summer Food Service Program. GAO obtained responses from 50 states and the District of Columbia. | GAO-18-369  
 Note: Respondents from some states also reported these factors as slightly challenging or not at all. In addition, fewer than half of states reported other factors as moderately to extremely challenging.

Source: *Larin, Kathryn "Summer Meals: Actions Needed to Improve Participation Estimates and Address Program Challenges"*

With these problems in mind, the following changes should be considered to increase access and improve summer meals:

- **Lower the area eligibility threshold to 40%**

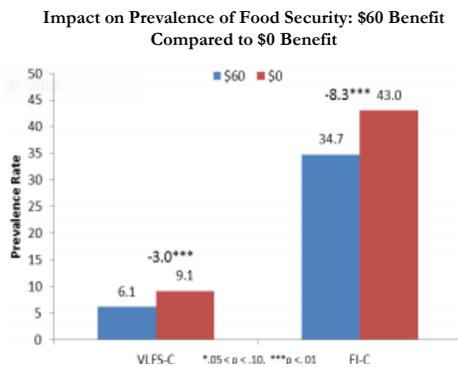
- Both the SFSP and SSO face a number of challenges, most notably, in their low participation numbers. The 2.6 million children served in July 2017 pales in comparison to the 20.1 million children eating a school lunch across the country during the 2016-2017 school year.<sup>181</sup> But expanding the area eligibility threshold might improve participation, particularly in rural and mixed-income areas. As reported by a Carsey Institute’s issue brief, open sites (who must meet an area eligibility threshold of 50%) represent 83% of SFSP locations. But, rural areas and mixed-income areas consistently struggle to meet this 50% threshold.<sup>182</sup> In a 2005-2006 pilot in rural Pennsylvania, in which the USDA authorized area eligibility for 40% areas, an additional 107 40-percent sites opened across Pennsylvania over the two year period.<sup>183</sup> Moreover, rural SFSP sites in Pennsylvania increased by 15% during the pilot period, indicating that lowering the threshold to 40% has the potential to largely increase participation.<sup>184</sup>

**Insights from the Field:**

“When there are cities with large income disparities, and there’s really only small pockets of the area that are eligible even though there are plenty of students that need access to free meals in the summer, it can be very difficult to find a good location for a site.” – *Krissy Scommegna, Child Nutrition Outreach Coordinator for Eastern Massachusetts*

➤ **Expand Summer EBTC**

- For a variety of reasons, summer food sites may be inaccessible to many low-income



Source: Collins et al, “Summer Electronic Benefit Transfer for Children (SEBTC) Demonstration: Summary Report

youths. As a result, a number of advocates have urged the government to increase SNAP benefits in the summer. Results from a Summer EBTC pilot support such a policy change. Authorized by Congress in 2009, the summer electronic benefits transfer for children using SNAP and WIC was rolled out in 2011 and 2012. The results were tremendous: a \$60 benefit per month per child reduced very high food insecurity during the summer by one-third.<sup>185</sup>

It’s further worth noting that while the \$30 benefit was as effective in reducing very high food

insecurity, the \$60 benefit reduced less severe food insecurity by 10% more than the \$30 benefit.<sup>186</sup> As reported by Abt Associates and Mathematica Policy Research, the 2011 demonstration cost \$3.6 million, including \$1.9 million in administrative costs and \$1.6 million in benefits. The 2012 demonstration cost \$13.2 million, including \$4.0 million in administrative costs and \$9.3 million in benefits.”<sup>187</sup>

➤ **Provide a better process for waiving the congregate feeding rule for rural areas and areas with safety concerns**

- Safety and transportation issues<sup>188</sup> are frequently cited as barriers to participation, especially in rural areas. The report, “Unmet Need in the Summer Meals Programs” notes that one of the “biggest hurdles” for summer meals is the congregate feeding requirement

which mandates children eat meals on site, rather than allowing them to carry them home.<sup>189</sup> Consequently, FNS has occasionally granted waivers to sites, allowing sites to be reimbursed for meals brought off-site property. However, FNS guidance is lacking: As the Government Accountability Report highlights, “guidance documents do not detail the specific circumstances that the agency considers when deciding whether to grant flexibility” and current waivers are retroactive rather than proactive.<sup>190</sup> Costs in implementing a more thorough, transparent procedure would likely be minimal but the impact could potentially be immense, particularly in high-crime areas.

➤ **Update meal patterns (particularly for teenagers) and raise reimbursement rates**

- For a number of reasons, teenagers have traditionally been a hard age-group to reach. One potential barrier for participation is the small portion sizes teens often receive. Unlike other nutrition programs, meal pattern requirements do not vary by age for the summer food service program. Consequently, “meals are not always adequate to meet the nutritional needs of teens.”<sup>191</sup> It’s further worth noting that unlike other child nutrition programs, whose nutrition standards were updated in the 2010 HHFKA, the SFSP meal patterns have not been updated since 2000.<sup>192</sup> Unsurprisingly then, a 2015 analysis of a sample SFSP menu revealed that meals are “high in carbohydrate and protein content and insufficient in vegetable servings.”<sup>193</sup> There, unfortunately, does not exist any reliable impact or cost measurement for updating meal pattern requirements. However, this estimate could likely be calculated by looking at the impact and cost of the HHFKA. Given that an additional six-cent reimbursement was warranted for the NSLP after nutrition updates, it is natural to assume that meal pattern updates for summer meals would also require higher reimbursements.

➤ **Authorize pilot to reimburse sponsors for adult meals**

- Since meals must be served to kids on-site only, summer meals can create an uncomfortable situation for parents and children alike. Adults’ inability to sit and eat with their kids may present itself as a barrier to nonparticipants and even participating children are forced to forego the benefits of the family meal.<sup>194</sup> At the local level, various sites have attempted to remedy these issues by serving adults. For example, by providing meals for adults, libraries in California were able to foster a more welcoming environment for families. As noted by an evaluation of the program, allowing adults to eat at the summer meal sites helped “build community among library patrons, neighbours, and staff.”<sup>195</sup> The federal government should encourage participation of the parents/guardians of children in summer meals sites by authorizing a pilot providing federal funds to serve adults.

**Insights from the Field:**

“It is definitely an awkward situation to give meals solely to kids, especially when you can tell the parents need something too and you cannot offer anything to them.” – *Krissy Scommegna, Child Nutrition Outreach Coordinator for Eastern Massachusetts*

“Allowing sites to serve parents could really increase participation.” – *Rosemarie Caward, Senior Outreach Coordinator*

➤ **Allow sites to serve a third meal**

- During the school year, many kids are eligible to receive a free school breakfast, school lunch, and afterschool meal and/or snack. Yet during the summer, sites are only eligible to be reimbursed for 2 meals and they are presently disallowed from receiving reimbursements for lunch and supper.

**Insights from the Field:**

“I think that a lot of communities want to feed kids and teens in their communities as much as possible...It’s also really tricky when you have all-day programs. There are kids that come to camp from 7 to 5 or 7 to 6 and these camps aren’t allowed to serve breakfast, lunch, and dinner to these kids even though they are there all day. Instead, they’re forced to pick and choose.” – *Krissy Scommegna, Child Nutrition Outreach Coordinator for Eastern Massachusetts*

These regulations are inconsistent with those that govern our school year programs and communities with high participation in free school and afterschool meals have demonstrated the need for 3 meals. To better address increased food insecurity in the summer,<sup>196</sup> the SFSP should be able to more closely model the benefits of school nutrition programs. By enabling sponsors to serve a third meal, we ensure children receive similar services year-round.

*BEST PRACTICES FROM OTHER STATES*

Across the country, cities and states have been innovating, creating alternative models for summer meals in an attempt to increase participation. An analysis of “lunch at the library” sites in California, for example, demonstrates that libraries might be a particularly good location for summer meals sites.<sup>197</sup> Various advocates across the country have also noted the importance of combining meals with programming.

In an attempt to address the limited operation of summer sites, the Extended Length of Operation project in Arkansas offered an additional \$0.50 reimbursement for each lunch served at sites which remained open for 40 days or more over the course of the summer. Results were overwhelmingly positive: “Among all SFSP feeding sites within the state, the median number of days open increased from 24 days in 2009 to 28 days in 2010 and to 39 days in 2011. Overall, the number of SFSP meal sites that were open for 40 or more days increased by 9.4 percentage points between 2009 and 2011.”<sup>198</sup> Arkansas received \$687,943 in 2010 and \$787,384 in 2011.<sup>199</sup>

The Activity Incentive in Mississippi, granted up to \$5,000 per site per summer to create new recreational or educational activities.<sup>200</sup> Over the 2-year demonstration, total meals served increased by 21.6% and the participation rate increased by 4.3%. Mississippi received \$500,550 for their demonstration project.<sup>201</sup>

Meanwhile, the Meal Delivery demonstration project in Massachusetts, Delaware, and New York allowed food to be delivered at the home or drop-off sites near the homes of children eligible for free or reduced price meals.<sup>202</sup> Costs were not evaluated for this demonstration project, however, it was calculated that approximately 74,000 meals were provided to children in rural areas who would not otherwise have been able to receive a SFSP meal.<sup>203</sup>

The Backpack Demonstration which aimed to serve food to children on holidays and weekends during the summer ran in Arizona, Kansas, and Ohio. In 2011, Arizona distributed 80,000 meals, Kansas served 24,290 backpacks, and Ohio distributed 58,270 meals.<sup>204</sup> Interestingly, the USDA reported that “demonstration sites in all three states showed higher increases in the number of meals served and average attendance ... than did comparison sites,” suggesting backpack programs also increase participation in regular SFSP and SSO sites. Like the meal delivery project, no costs were estimated for this demonstration project. The impressive results of these demonstration projects suggest they should continue to be funded.

A mobile meals model in Browning, Montana was spotlighted by the USDA.<sup>205</sup> Furthermore, Share our Strength highlighted Baltimore and Detroit for their collaborative efforts which resulted in a 10% increase and a 29% increase in participation in 2013 respectively.<sup>206</sup> Colorado and Arkansas were also hailed for their increased efforts.

Finally, in New Jersey, the Governor signed S 1897 into law this May, which mandated the summer meal program to operate in all school districts where 50% or more of students are eligible to free or reduced price meals.<sup>207</sup>

## **AFTERSCHOOL NUTRITION**

### *THE NEED: WHY AFTERSCHOOL MEALS?*

While the importance of school breakfast and lunch has been well established in the child nutrition literature, fewer studies have been devoted to the food low-income children eat after the school day. Yet these afterschool meals make up a considerable portion of children’s and teen’s diets. In a July 2013 Share Our Strength Afterschool Meals survey, 92% of low-income parents surveyed reported that their children ate some food after school, before their dinners.<sup>208</sup>

Unfortunately, the quality of these afterschool foods is normally quite low: 36% of respondents indicated their children were eating junk-food after school.<sup>209</sup> Most importantly, these afterschool snacks and meals constitute a significant expense for low-income families. With the average amount of money spent on afterschool snacks totaling \$743 dollars annually, it should come as no surprise that 59% of low-income parents reported that “it’s hard to provide food for their children after school” and that one in four “worry that their children don’t have enough to eat between lunch and breakfast the following day.”<sup>210</sup>

### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: To address this need, the US Government first began piloting snack demonstration projects in 1994. Four years later, during the 1998 Child Nutrition Reauthorization, Congress extended reimbursement for snacks through CACFP and the NSLP nation-wide.<sup>211</sup> Shortly thereafter, Congress authorized pilot programs for after school suppers across a number of states. Meal reimbursement through CACFP was eventually expanded to all states during the 2010 Child Nutrition Reauthorization under the Healthy, Hunger-Free Kids Act.<sup>212</sup>

Operation: Afterschool meals operate through two programs: The National School Lunch Program and the Child and Adult Care Food Program, more specifically under the At-Risk After School Supper and Snack portion of CACFP. Under the NSLP, sites may only be reimbursed for providing a snack. However, at-risk sites running through CACFP have the option to provide a snack, supper, or both. Eligibility to participate in both programs is predicated on a site residing in an area where 50% of school attendees qualify for free or reduced price meals. All meals and snacks served at these sites qualify for the free reimbursement rate. Sites providing snacks under the NSLP may still provide snacks in ineligible areas but the reimbursement rates will then shift to reflect the composition of participating kids’ free/reduced price meal statuses.<sup>213</sup>

For the 2017 – 2018 school year, reimbursement rates were as follows:<sup>214</sup>

<b>CACFP</b>			
	Breakfast	Lunch/Supper	Snack
Free	\$1.75	\$3.23	\$0.88
Reduced	\$1.45	\$2.83	\$0.44
Paid	\$0.30	\$0.31	\$0.08

<b>NSLP</b>	
	Snack
Free	\$0.88
Reduced	\$0.44
Paid	\$0.08

*Source: “Afterschool Reimbursement Rates,” Food Research and Action Center*

Capacity: According to the Food Research and Action Center, in October 2017, 1.2 million children received an afterschool supper and 1.6 million children received a snack across 46,000 afterschool programs nationwide.<sup>215</sup> Of the sites providing snacks, 1.2 million children received their snacks through NSLP funding and 335,000 children received their snacks via the At-Risk After School Program.

In a 2010 USDA analysis of NSLP snack sites, Cho and Guthrie reported that 75% of school sites were elementary schools. Additionally, 46% of schools were urban, 27% were suburban, and 27% rural.<sup>216</sup>

A CACFP Sponsor and Provider Characteristics study provides different insights on the At-Risk After School Program. According to the 2018 USDA study, almost half of all centers serve only suppers, 29.8% serve only snacks, 16.4% serve both suppers and snacks, and 10.6% provided some different meal combo. It's further worth noting that nearly three in four centers participate in the Summer Food Service Program when schools let out and the centers are no longer eligible to receive reimbursement through the At-Risk After School Program.<sup>217</sup>

### *EVIDENCE OF EFFECTIVENESS*

Since snacks launched nationwide in 1998 and suppers in 2010, millions of children have been impacted, and as trends indicate, they've been impacted at an increasing rate. In their 2018 analysis, the USDA reports that "Participation [in the at-risk after school program] has increased by 188% since eligibility was expanded to all states in 2010."<sup>218</sup> Meanwhile, looking at the after-school meals infrastructure as a whole, FRAC concludes that "participation in afterschool suppers is moving in the right direction."<sup>219</sup>

Increased participation in after-school meals presents an opportunity to enhance daily nutrition for low-income children. In a report from Harvard's Out of School Nutrition and Physical Activity (OSNAP) Initiative, Kenney et al were able to compare the nutritional quality of NSLP/CACFP provided snacks with snacks kids brought from home. In this Boston-based analysis, researchers concluded that "on days when children brought their own after-school snack, they consumed more salty, sugary foods and nearly 2 times as many calories than on days when they consumed only program-provided snacks."<sup>220</sup> This corroborates the impressions of at-risk center representatives, 53% of whom reported that the after school snacks and meals they provide help children "develop healthy eating habits."<sup>221</sup>

Similarly, in a USDA study of 13 pilot sites – who had been participating in supper reimbursements prior to the HHFKA 2010 expansion – state agency representatives noted that the program seemed to be crucially reaching low-income children and relieving some financial burden on parents. Four state agencies went as far as to express concern that children would not receive adequate nutrition at home without the at-risk meals component.<sup>222</sup>

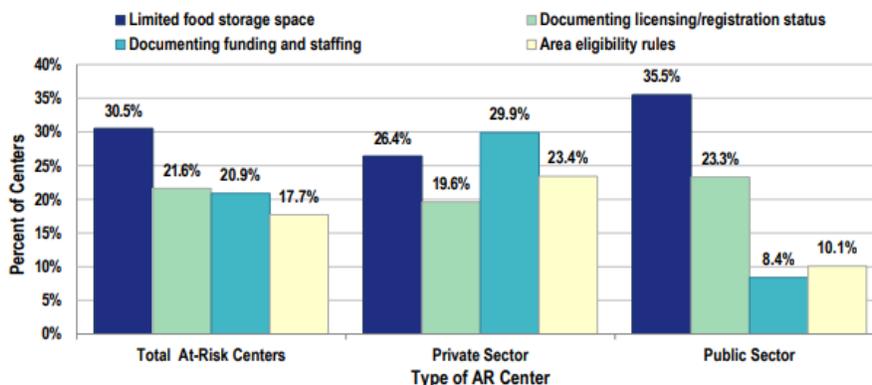
Finally, after school meals present an opportunity for school districts and sites to garner increased federal funding. The Los Angeles Unified School District, for example, noted that

increased participation in the program has helped rectify the food service program deficit troubling the district.<sup>223</sup>

### *SUGGESTED PROGRAM IMPROVEMENTS*

As evidenced below, despite the program’s success, there remain many issues with our current afterschool nutrition infrastructure.<sup>224</sup>

Distribution of At-Risk Centers by Primary Barriers to Initial Enrollment in the At-Risk Component of CACFP



\*These numbers are percentages of those centers (private-sector, 13.3%; public-sector, 13.4%) that reported experienced any barriers.

Source: Glantz et al., “Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study”

Subsequently, the following program improvements should be considered:

- **Lower the area eligibility threshold to 40%**
  - Afterschool Nutrition Programs are plagued by underutilization: By FRAC’s estimates, “nationally, only one child for every 19 low-income children who participated in school lunch in October received an after school supper.”<sup>225</sup> But there is good reason to believe that loosening eligibility guidelines could help with chronically low participation. As a wide range of advocates has noted, the current 50 percent area eligibility threshold is too prohibitive and inconsistent with other afterschool funding policies. The 21<sup>st</sup> Century Community Learning Centers Program, for example, which is the main federal funding mechanism for afterschool enrichment, has a 40% area threshold. Lowering the threshold would likely have an even larger impact on rural districts, whose geographic challenges often preclude them from meeting the 50% threshold. Mixed-income areas may also benefit immensely from such a program improvement.
- **Allow sites to move beyond school level data to determine eligibility, using the Summer Food Service Program eligibility requirements as a guideline**
  - Present regulations require solely school data to be used to determine area eligibility. Yet, programs such as the Summer Food Service Program allow for a greater number of methods to be used to determine program eligibility such as census data. To further raise afterschool nutrition program participation, eligibility requirements should be loosened.

- **Streamline the Summer Food Service Program application process and the Afterschool Nutrition application process, allowing sites to more seamlessly offer services 365 days a year**
  - Streamlining the application process for the SFSP and Afterschool meals would likely cost little to implement. However, by easing administrative burdens and eliminating barriers, this change would hopefully raise participation rates. At present, three in four afterschool centers participate in the SFSP when school let out.<sup>226</sup> Facilitating an easier transition between afterschool programs and the SFSP would likely help move that remaining 25% of afterschool sites towards full-year service.
- **Increase access to suppers by allowing them to be served through NSLP**
  - Current regulations allow after school suppers to be served through CACFP sites but preclude NSLP sites from serving a meal. As such, while 1.6 million children are currently receiving an afterschool supper through the CACFP At-Risk Afterschool Program, the 1.2 million children receiving an afterschool snack through the NSLP are denied the opportunity for a full meal.<sup>227</sup> If NSLP sites mimicked the rates exhibited by CACFP sites, nearly half of all centers would transition to serve supper and roughly 30% would serve both a snack and supper.

#### *BEST PRACTICES FROM OTHER STATES*

Many states provide additional funding for their afterschool programs, above and beyond what the federal government provides through the 21<sup>st</sup> Century Community Learning Centers Program. California, for example, is among 17 states to support afterschool programming, providing \$600 million dollars to their After School Education and Safety Program. Tennessee and Oklahoma have redirected unclaimed lottery funds to their afterschool programs.

Other states have made active efforts to encourage increased participation in afterschool meals. Oregon, for example, mandates 21<sup>st</sup> Century Community Learning Centers provide supper<sup>228</sup> and has streamlined their application process by making after school meals a “one-page addendum ... to the NSLP application.”<sup>229</sup>

The District of Columbia’s efforts in the afterschool nutrition arena have been particularly noteworthy. Working in conjunction with DC Hunger Solutions, the DC Public School System was able to increase afterschool program participation by 7%, feeding in total 9,240 students per day in the 2010-2011 school year.<sup>230</sup>

## PART 3: EARLY CHILDHOOD

### **SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN (WIC)**

#### *THE NEED: WHY SSNP FOR WIC*

Early childhood is a critical time for developing a number of skills and establishing healthy eating habits: In the words of researcher, Jack Shonkoff, “sound health in early childhood provides a foundation for the construction of sturdy brain architecture and the achievement of a broad range of skills and learning capacities”<sup>231</sup> and as FRAC’s most recent Research Wire highlights, during early childhood, children develop “food preferences that can last a lifetime.”<sup>232</sup>

Given the importance of this time period, nutritional deficiencies in early childhood should be taken very seriously. Yet unfortunately, too many low-income families struggle to provide adequate food for their young infants and children. According to a survey conducted by Share Our Strength’s No Kid Hungry, “food and nutrition is a top concern for more than 8 in 10 low-income families with young children.”<sup>233</sup> They further report that over half of families report running out of food without having money to buy more.<sup>234</sup> With one in three parents admitting their children were not eating enough, early childhood nutrition clearly presents a sizeable problem.<sup>235</sup>

#### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: In response to this need, the Special Supplemental Nutrition Program for Women, Infants, and Children was first piloted in 1972, expanded to 45 states in 1974, and permanently authorized in 1975.<sup>236</sup> Slight eligibility alterations were also made in 1975 as the program grew to include children up to age 5 (previously, eligibility stopped at age 4) and to non-breastfeeding post-partum women (non-breastfeeding women were previously excluded).<sup>237</sup> In 1978, legislation also mandated that nutrition education had to be provided, targeted certain nutrients to be included, and required states to coordinate referrals to other service programs.<sup>238</sup>

In the 1990s and early 2000s various campaigns, initiatives, and food package modifications were implemented to encourage breastfeeding among WIC participants. Finally, in 2009 the USDA changed the WIC food packages to better adhere to the Dietary Guidelines for Americans.<sup>239</sup>

Operation: To participate in WIC, applicants must meet categorical, income, and nutritional risk requirements. First, eligibility is restricted to solely serve pregnant, postpartum, and breastfeeding women as well as infants and children under the age of 5.<sup>240</sup> Participants’ household income must fall below 185% of the federal poverty line or they may become adjunctively eligible through participation in Medicaid, TANF, or SNAP.<sup>241</sup> Finally, participants must be considered nutritionally at risk as determined by a health professional. The USDA recognizes two major nutritional risks: medically-based risks and diet-based risks.<sup>242</sup> Unlike

many other major federal programs, eligibility is not restricted to U.S. citizens.<sup>243</sup> States are allowed to restrict program participation, but as of 2018, no states have done so.

While a discretionary program, WIC has been fully funded by Congress since 1997.<sup>244</sup> In the event that demand outpaces funds, the federal government has created a priority system for waiting lists:<sup>245</sup>

- Priority I - The following applicants with nutrition-related medical conditions such as anemia, underweight, overweight or pre-term birth: pregnant women, breastfeeding women, infants
- Priority II - Infants (up to 6 months of age) whose mothers participated in WIC or could have participated and had nutrition-related medical conditions
- Priority III - Children with nutrition-related medical conditions
- Priority IV - The following applicants with dietary problems (like poor diet): infants, pregnant women, breastfeeding women
- Priority V - Children with dietary problems (like poor diet)
- Priority VI - Postpartum (non-breastfeeding) women with nutrition related-medical conditions or dietary problems
- Priority VII - Current WIC participants who without providing the WIC supplemental foods could continue to have medical and/or dietary problems

Once eligibility is determined, participants may receive monthly benefits for certain, specified foods based on their categorical status. These food packages are detailed below:<sup>246</sup>

Overview of the Seven WIC Food Packages

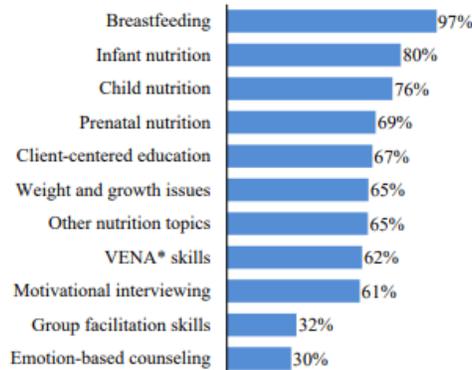
Package #	Participant Category	Age/Duration	Foods	Cash Value Voucher Amount <sup>2</sup>
I	Infants <sup>2</sup>	Ages 0 through 5 months old	Infant formula	-
II	Infants <sup>2</sup>	Ages 6 through 11 months old	Infant formula, infant cereal, infant fruits and vegetables, infant meat	-
III	Participants with qualifying conditions (includes women, infants, children) <sup>3</sup>	Same as participant's category	With medical documentation: infant formula, exempt infant formula, or WIC-eligible medical foods, plus all of the foods in the packages to which they would have been eligible in the absence of their special medical needs	Same as participant's category
IV	Children	Ages 1 through 4 years old	Juice, milk, breakfast cereal, eggs, whole-wheat bread, legumes or peanut butter, fruits and vegetables	\$8
V	Pregnant and Partially Breastfeeding Women	Pregnant women: until mother gives birth; Partially breastfeeding women: up to 1 year after giving birth	Juice, milk, breakfast cereal, eggs, whole-wheat bread, legumes and peanut butter, fruits and vegetables	\$10
VI	Postpartum Women (non-breastfeeding)	Up to 6 months postpartum	Juice, milk, breakfast cereal, eggs, legumes or peanut butter, fruits and vegetables	\$10
VII	Fully Breastfeeding Women	Up to 1 year	Juice, milk, cheese, breakfast cereal, eggs, whole-wheat bread, legumes and peanut butter, canned fish, fruits and vegetables	\$10

*Source: Aussenberg, Randy Alison, and Julia Kotrey. "A Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children."*

Most participants receive these food packages through a food voucher retail-delivery system though states do have flexibility in their delivery models.<sup>247</sup> However, by 2020, states will no longer be authorized to utilize vouchers and must instead utilize the EBT system.

In addition to food benefits, WIC participants also receive nutrition education, including breastfeeding promotion. While education services vary, the following topics were identified as particularly popular:<sup>248</sup>

Training Topics Provided to Nutrition Educators in the Past 12 Months by Percentage of Sites



\*Value Enhanced Nutrition Assessment (VENA) is a comprehensive assessment that reinforces the importance of nutrition in determining WIC eligibility and providing other nutrition services that are relevant to the participant's needs.

Source: Cates et al, WIC Nutrition Education Study.

Finally, WIC agents often refer participants to other social services and may provide information on other government programs such as Medicaid.

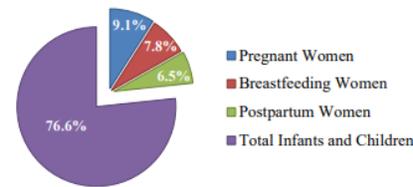
Capacity: In fiscal year 2017, WIC served roughly 7.3 million women, infants, and children each month.<sup>249</sup> As the charts below indicate, infants and children are the primary recipients of services. However, there are noticeable drop-offs in participation as children age: While infants make up 23.3% of participants, four-year-olds make up just 7.4%:<sup>250</sup>

Infant and Child Participation by Age



Source: Thorn et al, WIC Participant and Program Characteristics 2016

Percent of WIC Participants by Category



WIC = Special Supplemental Nutrition Program for Women, Infants, and Children

Source: Thorn et al, WIC Participant and Program Characteristics 2016

The federal government spends roughly \$5.6 billion dollars each year on WIC with the average monthly food cost per person totaling \$41.24.<sup>251</sup>

### EVIDENCE OF EFFECTIVENESS

Since its inception, WIC has been heavily studied by a wide range of researchers and policy analysts. The evidence overwhelmingly supports the program. Studies have estimated that WIC reduces food insecurity for children by at least 20 percent, meanwhile, here in Massachusetts, the risk of food insecurity was roughly one-third lower for mothers who enrolled in WIC during their first (rather than their third) trimester.<sup>252</sup> The effects of WIC extend beyond just the

intended recipients: a 2013 study in the Journal of Family & Economic Issues indicated the “presence of a health spillover from a WIC participant to an age ineligible child with whom he/she shared a residence.”<sup>253</sup>

WIC participants also tend to be healthier than their counterparts: In a study of NHANES data, for example, researchers found that WIC children consumed more fruit and had more appropriate caloric intakes than income-eligible nonparticipants.<sup>254</sup>

Furthermore, WIC’s effects reach beyond nutrition and diet, as studies indicate that a mother’s participation has a “direct effect on [a child’s] noncognitive skills.”<sup>255</sup> Moreover, prenatal WIC participation results in a 5.3% lower probability of being diagnosed with ADHD, an 8.2% lower probability of repeating a grade, and a 17.7% lower probability of developing a moderate to severe infection.<sup>256</sup>

**SUGGESTED PROGRAM IMPROVEMENTS**

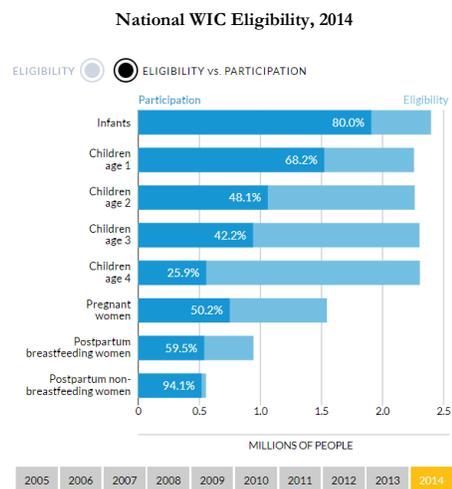
➤ **Implement the Institute of Medicine’s Recommendations for WIC Food Packages**

➤ The WIC food packages have not been updated since 2009, pre-Healthy, Hunger-Free Kids Act. Subsequently, at present, they are not consistent with the most up to date nutrition guidelines. This should be remedied. Fortunately, the Institute of Medicine has provided extensive guidance on updated food packages which will ultimately provide at least 50% of most priority nutrients and allow for greater flexibility in breastfeeding supports.<sup>257</sup> These revisions were designed to be cost neutral.

➤ **Give states the option to extend eligibility for children to age 6**

➤ At present, WIC cuts off the day before a child turns 61 months, or roughly one month after a child’s fifth birthday as a child presumably begins receiving free or reduced price meals at school. Unfortunately, not all children begin kindergarten at age five. In 2010, only 79% of five-year-olds were enrolled in elementary school.<sup>258</sup> For low income-children, this gap can have deleterious consequences: A study by Arteaga et al reports that “there is an increase in rates of food insecurity for children who become age-ineligible for WIC (i.e., reach 61 months of age) and who have not yet started kindergarten.”<sup>259</sup> As such, WIC eligibility should be extended to age six. Given the eligibility vs. participation data provided to the right, it seems reasonable to assume that approximately 500,000 children could be impacted by this policy.<sup>260</sup> At a monthly food cost of \$41.24,<sup>261</sup> this policy change would roughly cost the federal government 250 million dollars.

➤ **Give states the option to certify infants for two years**



Source: Johnson et al, “Volume II: Appendices: National- and State-Level Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibility and Program Reach in 2014, and Updated Estimates for 2005-2013”

- The Special Supplemental Nutrition Program for Women, Infants, and Children is also plagued by low participation. According to a report by the USDA, the overall participation rate (calculated as the number of participants compared to those eligible to receive benefits) has been declining since 2011, reaching just 54.8% of eligible participants in 2014.<sup>262</sup> Though eligibility data has not been released since, it is further worth noting that participation levels in general have been dropping for the past three years,<sup>263</sup> and that participation tends to decline with age.<sup>264</sup> To help remedy this issue, recertification periods for infants should be extended to the two-year mark.<sup>265</sup> This policy not only has the potential to increase participation by making the program more accessible to busy young mothers, but will also likely make the program cheaper by reducing administrative burdens.

### *BEST PRACTICES FROM OTHER STATES*

Best practices in WIC have largely centered around technology. For example, states utilizing mobile phone apps such as WIC Shopper have improved customer experiences by allowing program participants to more readily understand what foods are contained in their WIC packages.<sup>266</sup>

Telehealth has also increasingly been utilized by states to try and increase participation and remove barriers, allowing mothers to receive nutrition education over video platforms rather than in-person visits.<sup>267</sup> According to the National WIC Association, Texas, Washington, DC, Nevada, Georgia, Mississippi, West Virginia, Oregon, California, and Massachusetts “have begun to use telehealth to provide nutrition counseling or breastfeeding support in areas with large geographic area to cover but limited staff available.”<sup>268</sup>

Finally, researchers in San Jose, California have utilized behavioral science to tackle participation problems.<sup>269</sup> Advocating for policy change at the local, state, and federal level, Grodsky et al maintain that WIC eligible non-participants might be nudged towards participation through policy solutions such as offering childcare during WIC clinics or reducing the food price myth (the idea that healthy foods must inherently cost more) through gamification.<sup>270</sup>

## **WOMEN, INFANTS, AND CHILDREN (WIC) FARMERS' MARKET NUTRITION PROGRAM**

### *THE NEED: WHY WIC FMNP*

The importance of fresh fruits and vegetables in establishing an adequate diet has been widely covered in the literature and has been touched upon more thoroughly in this report's Fresh Fruits and Vegetables Program Section. Particular attention must also be paid, however, to the importance of *early exposure* to fruits and vegetables. As has been extensively reported, developing good eating habits early on is a crucial indicator of good nutrition later on in life – these findings remain true for fruits and vegetables. Indeed, as concluded by Grimm et al in their 2014 study, “infrequent intake of fruits and vegetables during late infancy is associated with infrequent intake of these foods at 6 years of age.”<sup>271</sup> Fletcher et al reached similar conclusions in their analysis of the Gateshead Millennium Study, noting that “an early liking for [fruits and vegetables] predicted later intake, so increasing early exposure to [fruits and vegetables] could have long term beneficial consequences.”<sup>272</sup>

Yet despite the importance of early exposure, too often infants and toddlers lack adequate intake of fruits and vegetables. From 2001 to 2004, researchers report that approximately 32% of 2 to 3-year-old children were consuming fewer fruits than recommended and a whopping 80% were consuming fewer vegetables than recommended.<sup>273</sup> Fox et al come to similar conclusions in their “Feeding Infants and Toddlers Study,” finding that anywhere from 18 to 33% of infants and toddlers consumed no vegetables and anywhere from 23% to 33% were not consuming fruit.<sup>274</sup> Clearly, early intervention in fruit and vegetable consumption is needed.

### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: Out of this need came the Women, Infants, and Children Farmers' Market Nutrition Program (WIC for FMNP). Beginning in 1989 as a ten-state demonstration project, WIC for FMNP was officially authorized in 1992.<sup>275</sup> By 2002, the program had expanded to 36 states. Today it operates through 49 state agencies, U.S. Territories, and Federally recognized Indian Tribal Organizations.<sup>276</sup>

Operation: WIC for FMNP serves two purposes: to provide fresh fruits and vegetables to eligible participants and to support farmers and farmers' markets. WIC for FMNP serves the same beneficiaries as the larger Special Supplemental Nutrition Program for WIC, though they do not begin serving infants until age four. Importantly, applicants who would otherwise be considered eligible but are on a waiting list may participate in the WIC for FMNP.<sup>277</sup>

Once approved for benefits, WIC for FMNP participants may receive checks or coupons, normally in addition to their regular WIC benefits, to purchase fruits and vegetables at a state-approved, locally grown,<sup>278</sup> farmers' market. Federal benefits for individuals and households range between \$10 to \$30, though states may offer additional funding to raise benefit levels.<sup>279</sup> Nutrition education is also provided through a variety of mechanisms, though it is most often provided by local WIC agencies.

At the federal level, the government provides 100% of funds for food costs and 70% of funds for administrative costs. States must cover the remaining 30% of administrative cost.<sup>280</sup>

**Capacity:** In Fiscal Year 2017, the federal government appropriated \$18.548 million for the FMNP.<sup>281</sup> Additionally, 16,815 farmers, 3,312 farmers' markets and 2,367 roadside stands were authorized to accept FMNP checks or coupons in fiscal year 2017.<sup>282</sup> For a more complete breakdown of how these figures play out at the state level, please see the chart below:<sup>283</sup>

WIC Farmers' Market Nutrition Program FY 2017 Profile

State	Grant Amount FY 2017	Recipients	Season Benefit Level	Farmers	Markets	Stands
Alabama	\$113,343	7,432	\$20	197	24	26
Alaska	\$185,379	10,215	\$25	78	5	29
Arizona	\$193,885	9,394	\$30	86	32	0
Arkansas	\$156,599	13,398	\$16	264	30	0
California	\$2,063,983	343,697	\$20	1,055	474	0
Chickasaw Nation, OK	\$75,000	2,388	\$30	126	25	60
Choctaw Nation, OK	\$75,000	2,075	\$30	111	10	3
Connecticut	\$299,230	43,738	\$15	348	123	11
Delaware	\$262,093	12,765	\$15	0	13	0
District of Columbia	\$283,121	10,972	\$30	75	0	0
Five Sandoval Indian Pueblos, NM	\$6,337	191	\$25	210	12	0
Florida	\$285,964	28,792	\$20	136	48	18
Georgia	\$1,242,658	31,333	\$30	69	0	0
Guam	\$78,911	3,274	\$20	11	7	4
Illinois	\$363,653	25,393	\$15	266	0	69
Indiana	\$238,853	16,991	\$24	505	97	133
Iowa	\$468,191	41,442	\$27	726	212	110
Kentucky	\$185,361	10,099	\$20	1,000	85	0
Louisiana	\$10,250	613	\$20	130	21	20
Maine*	\$75,000	7,768	\$12.22	175	0	88
Maryland	\$358,628	55,104	\$20	459	0	0
Massachusetts	\$520,995	31,681	\$20	384	230	22
Michigan	\$450,777	28,911	\$25	1,388	152	167
Minnesota	\$320,000	50,237	\$25	335	42	0
Mississippi	\$94,642	5,614	\$20	200	14	1
Mississippi Band of Choctaw Indians**	\$21,715	720	\$30	25	1	0
Montana	\$59,782	2,170	\$30	130	0	0
Nebraska	\$75,000	4,959	\$15	345	0	345
Nevada	\$344,117	8,115	\$30	34	0	2
New Jersey	\$1,056,954	43,864	\$20	210	0	184
New Mexico	\$251,127	8,400	\$25	670	65	15
New York	\$3,803,537	343,426	\$24	935	673	84
North Carolina	\$233,600	11,851	\$24	550	50	0
Ohio	\$447,916	24,990	\$20	296	23	134
Oregon	\$566,205	43,244	\$20	575	84	330
Osage Tribe, OK	\$41,325	2,047	\$20	18	0	0
Pennsylvania**	\$2,062,427	173,620	\$20	1,147	0	0
Pueblo of San Felipe, NM	\$8,666	356	\$20	43	1	43
Puerto Rico	\$1,554,783	70,393	\$20	138	81	0
Rhode Island	\$125,787	12,371	\$21	66	30	0
South Carolina	\$126,899	30,478	\$25	249	109	48
Tennessee	\$125,000	10,662	\$20	106	0	0
Texas	\$1,054,646	28,435	\$30	183	24	0
Vermont**	\$75,282	2,057	\$30	242	42	0
Virgin Islands	\$77,791	1,577	\$30	36	0	0
Virginia	\$63,766	3,549	\$20	188	0	0
Washington	\$800,003	43,527	\$20	683	146	63
West Virginia	\$74,965	4,253	\$20	340	90	45
Wisconsin	\$831,969	71,135	\$20	1,272	237	313
<b>Total</b>	<b>\$22,291,115</b>	<b>1,739,716</b>	<b>Average</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
				<b>\$23</b>	<b>16,815</b>	<b>3,312</b>

\* This benefit level represents a weighted average.  
\*\* Served additional recipients with non-federal funds not reflected in this chart.

Source: "WIC Farmers' Market Nutrition Program FY 2017 Profile." United States Department of Agriculture

## EVIDENCE OF EFFECTIVENESS

Offering immense support for the program, a variety of studies across the country have reported positive impacts of the WIC FMNP on both the lives of program beneficiaries and of farmers. In a study of a Wisconsin program, for example, 72% of WIC FMNP participants surveyed reported eating more fresh fruits and vegetables in the summer than usual and 86% reported that they planned to eat more produce all year round.<sup>284</sup> Meanwhile, 80% of farmers interviewed reported increased sales from participating in the FMNP.<sup>285</sup>

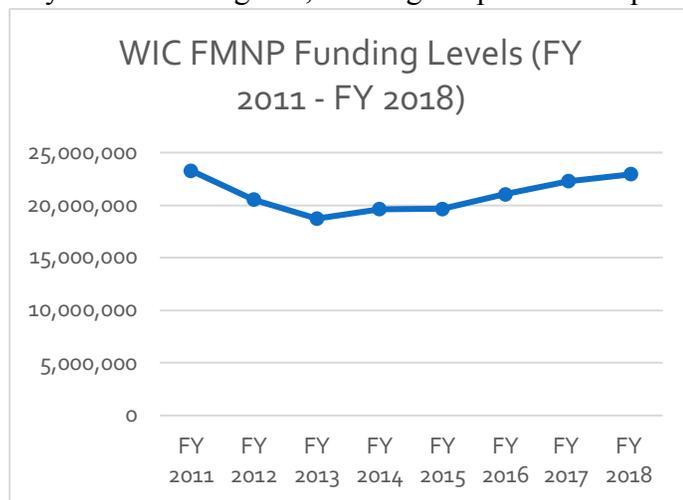
These results extend across the country, as farmers in Florida indicated that 35% of overall sales stemmed from the WIC FMNP.<sup>286</sup> A more thorough analysis of six states conducted by Just and Wenninger offers further support, noting that “farmers gained about 7% to 9% more than the check redemption through additional purchases.”<sup>287</sup>

Studies which focus solely on program participants also largely support the WIC FMNP. A 2007 study comparing SSNP WIC users and WIC FMNP users concluded that “Farmers’ Market Nutrition Program participants exhibit more indicators of a healthful diet,” indicating the program has been effective in achieving its goals.<sup>288</sup>

### *SUGGESTED PROGRAM IMPROVEMENTS*

#### ➤ **Increase funding for WIC FMNP**

- Funding for WIC FMNP is relatively small and stagnant, limiting the potential impact of the program.<sup>289</sup> At a minimum, funding levels should be restored to their FY 2011 levels. This would require an additional \$332,364 or a 1.5% increase in funding. When Congress initially cut the program in 2012 and again in 2013, farmers markets reported that “these cuts directly diminish[ed] the incomes of several thousand produce farmers, putting constraints on their ability to continue selling at markets in the low-income neighborhoods that need[ed] the fresh produce the most.”<sup>290</sup> While funding has improved since, given the substantial impact on program participants and farmers, funds should be reinstated to FY 2011 levels.



Source: Chart generated using data from FY 2011 - FY 2018 WIC Farmers’ Market Nutrition Program Grant Amounts.” United States Department of Agriculture

#### ➤ **Offer additional grant funding to support initiatives for states trying to achieve higher redemption rates in WIC FMNP**

- The WIC FMNP is plagued by low redemption rates. Far away locations and inconvenient market hours present sizeable barriers for participants.<sup>291</sup> As a result, redemption rates have fallen as low as 45% in some markets.<sup>292</sup> Yet at the state level, there exist a plethora of strategies local WIC clinics may implement to encourage higher participation. However, many of these strategies require additional funds. Providing grants to those states who seek to implement a redemption raising strategy but require infrastructure assistance, could help make the WIC FMNP more effective and increase access. To get a better sense of what these redemption rate strategies may look like, please see the best practices listed below.

## *BEST PRACTICES FROM OTHER STATES*

Various states have gone above and beyond to try and raise redemption rates. As noted by the Farmers' Market Coalition, the state of Michigan has achieved higher success because of its education programming which teaches participants about the preparation, storage, and nutritional value of fruits and vegetables.<sup>293</sup> They further note that Washington, New York,<sup>294</sup> and Ohio have been more effective because "they have leveraged additional funds for marketing and outreach activities."<sup>295</sup> In Toledo, Ohio, for example, marketing the farmers' market as a community gathering site led to an increase of \$1,000 in FMNP sales.<sup>296</sup>

In New Jersey, a WIC clinic which offered an on-site refrigerator stocked with produce achieved higher redemption rates than clinics which offered a weekly farm stand.<sup>297</sup> New Jersey has also seen some success by offering health screening checks (in Camden)<sup>298</sup> and from the WIC Fresh Start module, a "theory-driven, web-based lesson to promote FV intake."<sup>299</sup>

Using funds to increase voucher values may also be a successful strategy. Programs such as Kentucky Double Dollars, Double Value Coupon Program, and Matching Dollars have provided additional incentive for participants to redeem their coupons by making the benefit harder to ignore.<sup>300</sup>

Finally, looking outside the country, the Grimsby Farmer's Market in Ontario, Canada has increased participation in a program similar to the WIC FMNP by handing out free coupons to random consumers at the market which serves to "conceal the identity of low-income voucher recipients."<sup>301</sup> By reducing stigma, this innovation is able to utilize just small levels of additional funds to raise redemption rates among program participants.

## **CHILD AND ADULT CARE FOOD PROGRAM (CACFP)**

### *THE NEED: WHY CACFP?*

As was highlighted in the WIC section, a wide range of literature has established the importance of nutrition in early childhood. According to a research brief from Children’s HealthWatch, “food-insecure young children are nearly twice as likely to be in fair or poor health when compared to food-secure young children and significantly more likely to be hospitalized.”<sup>302</sup> Furthermore, food insecure infants and toddlers have also been found to be two thirds more likely to be at risk for developmental delays.<sup>303</sup> For young children, food insecurity is particularly troubling because of its potential to create long-term damage. As stated by Children’s HealthWatch, “The stress that family hardships, like food-insecurity, place on a young child physically alter the development of crucial brain structures controlling memory and psychosocial functioning.”<sup>304</sup> Early childhood thus appears as a crucial time for intervention.

Unfortunately, despite the pressing importance of nutrition in early childhood, surveys of low-income parents indicate that - faced with a host of daily expenses - it is during early-childhood that parents are particularly stretched financially. Among households with children aged 0 - 4, a startling 23.7% face food-insecurity.<sup>305</sup> Furthermore, in the “Early Childhood Research Brief: A National Survey of Low-Income Parents of Young Kids,” 68% of those interviewed said they were worried their food would run out before they got money to buy more. Additionally, 42% of low-income parents with young children reported they were unable to feed their child a balanced meal.<sup>306</sup>

### *PROGRAM BASICS: HISTORY, OPERATION, CAPACITY*

History: The Child and Adult Care Food Program (CACFP) presents one crucial solution to this problem. Beginning as a pilot program in 1968 as part of the Special Food Service Program for Children, the Child Care Food Program (CCFP) was separated out in 1975 under Public Law 94-105. In 1987, with the addition of adult day care centers, CCFP began operating as the CACFP we are more familiar with today, a name change which became official in the 1989 Child Nutrition Reauthorization.<sup>307</sup>

In 1996, under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), Congress and President Bill Clinton created significant changes to the reimbursement structure for family child care homes,<sup>308</sup> a change which would lead to a tremendous decline in CACFP participating family child care homes moving forward.<sup>309</sup> The next decade brought minor changes in eligibility rules and expansions into different sites: most notably, the addition of At-Risk Afterschool sites which has been discussed separately for the purpose of this report.

The Healthy, Hunger-Free Kids Act prompted the first change to meal patterns in CACFP since 1968, in an effort to make CACFP meals healthier and more consistent with the standards in place for the National School Breakfast and Lunch Programs. CACFP sites were mandated to implement these meal pattern changes by October 1, 2017.<sup>310</sup>

Operation: CACFP operates through a variety of different sites including child care centers, family day care homes, adult day care centers, homeless shelters, domestic violence and runaway shelters, and the at-risk afterschool sites discussed previously. At these sites, children below the age of 12 (age 15 for migrant children, or any age for disabled children) can receive up to two meals and one snack.<sup>311</sup> Shelters may serve three meals maximum to children 18 and younger.<sup>312</sup> Adult-day care centers can serve adults who are functionally impaired or over age the age of 60 if they provide community-based programs that are non-residential.<sup>313</sup>

Child care centers, including Head Start Programs, have a three-tiered reimbursement rate structure based on the same guidelines structuring the NSLP and NSBP reimbursements. Since 1996, family day care homes have followed a two-tiered reimbursement structure. Tier I homes are located in areas where 50% of school age and enrolled children qualify for free or reduced price meals. Either census or school data may be used to determine area eligibility.<sup>314</sup> Low-income providers may also qualify for Tier I status. All other homes qualify for Tier II status, although, Tier II homes may seek Tier I reimbursement rates for their low-income children.<sup>315</sup> Family day care homes also must have a sponsor, who are provided an administrative payment based on how many day care homes they sponsor.<sup>316</sup> See “School Meals Programs and Other USDA Child Nutrition Programs: a primer” for more information.

Reimbursement rates for child care centers, family day care homes, and the accompanying sponsor administrative payment rates are as follows:

<b>Meals Served in Child Care Centers (Per Meal Rates)</b>			
	Supplements/Snacks	Lunches/Suppers	Breakfasts
Free	\$0.91	\$3.31	\$1.79
Reduced Price	\$0.45	\$2.91	\$1.49
Paid	\$0.08	\$0.31	\$0.31

*Source: "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs," Food Research and Action Center*

<b>Meals Served in Day Care Homes (Per Meal Rates)</b>			
	Supplements/Snacks	Lunches/Suppers	Breakfasts
Tier I	\$0.73	\$2.46	\$1.31
Tier II	\$0.20	\$1.48	\$0.48

*Source: "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs," Food Research and Action Center*

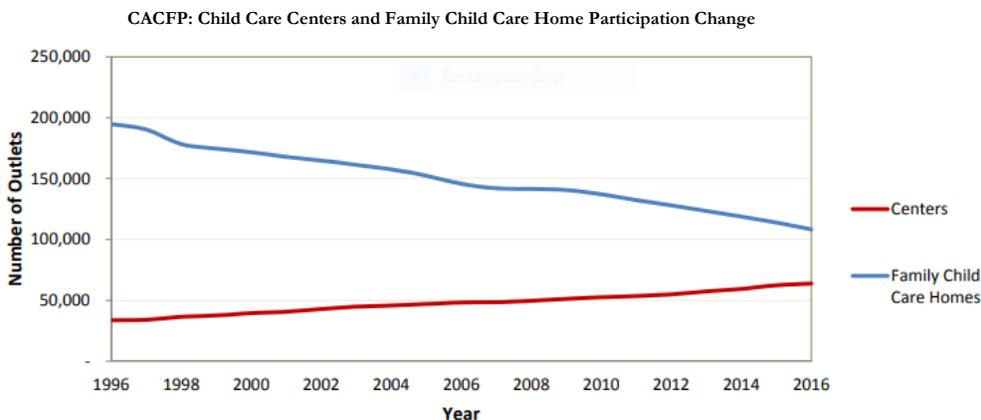
<b>Administrative Payment Rates for Sponsoring Organizations of Day Care Homes (Per Home Per Month Rate)</b>	
First 50 day care homes	\$118
Next 150 day care homes	\$90
Next 800 day care homes	\$70
Additional day care homes	\$62

*Source: "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs," Food Research and Action Center*

Capacity: In Fiscal Year 2017, CACFP provided 2 billion meals and snacks to: 4.4 million children daily in child care/family care/afterschool programs, 131,000 persons in Adult Day Care, and 64,000 child care centers.<sup>317</sup> This resulted in \$3.5 billion dollars’ worth of reimbursements to providers (Note: this includes after school meal funds as well).<sup>318</sup>

CACFP centers report the following average daily attendance rates: child care centers report about 56 children per center, day care homes report 7 children per home, and adult day care centers report 48 chronically ill or elderly adults per center according to FY 2017 CACFP data.<sup>319</sup>

Since 1996, and the subsequent changes to tiered reimbursements, the proportion of family day care homes to child care centers has drastically changed. Facing lower reimbursements, family child care homes have been participating at lower numbers with each passing year.<sup>320</sup>



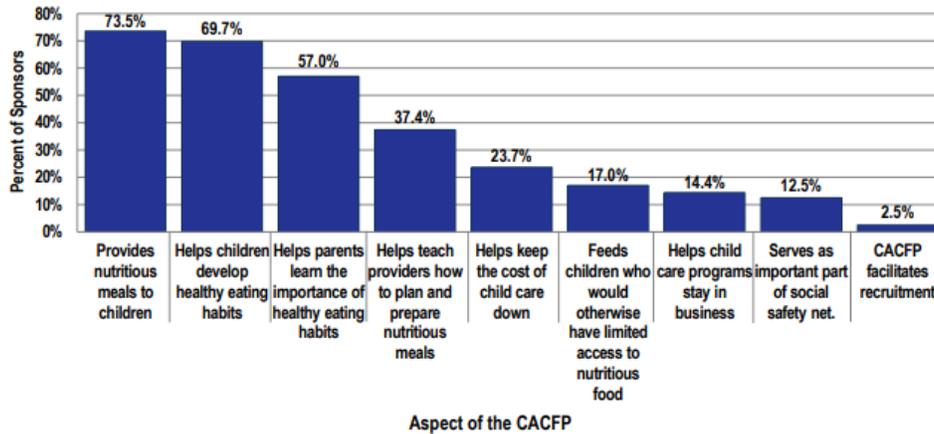
## EVIDENCE OF EFFECTIVENESS

A number of studies have revealed the tremendous importance of the Child and Adult Care Food Program in reducing food insecurity and increasing nutrition. In a study by Heflin, Artega, and Gable from the University of Missouri, researchers determined that participation in the CACFP program “results in a small reduction in the risk of household food insecurity.”<sup>321</sup> Similarly utilizing data from the Early Childhood Longitudinal Study, Korenman, Abner, Kaestner, and Gordon tie CACFP participation to key nutrition indicators, noting that “CACFP participation moderately increases consumption of milk and vegetables, and may also reduce the prevalence of overweight and underweight.”<sup>322</sup>

Korneman et al’s broader findings have been corroborated by the work of smaller state-level studies as well. In a survey of 429 California-based child care providers, for example, Spector et al concluded that “CACFP sites in general ... served more fruits, veggies, milk, and meat and fewer sweetened beverages and other sweets and snack-types items than Non-CACFP sites.”<sup>323</sup> Similarly, in a statewide examination of Georgia, Cotwright et al found that CACFP sites were significantly less likely than non-CACFP programs to serve sugar-sweetened beverages.<sup>324</sup>

These research findings are further supported by the impressions formed by stakeholders on the ground. In a 2017 CACFP Sponsor and Provider Characteristics Study, CACFP sponsors reported the following benefits of the CACFP program.<sup>325</sup>

Percentage of All Sponsors Strongly Agreeing to the Importance of Selected Aspects of the CACFP

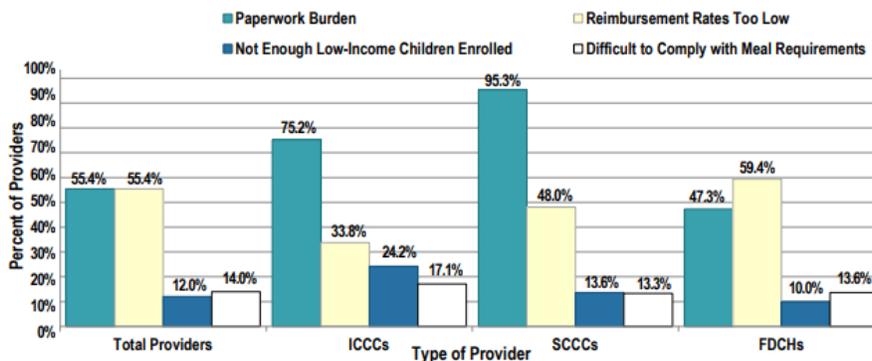


Source: Glantz et al., "Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study."

### SUGGESTED PROGRAM IMPROVEMENTS

CACFP’s record of success speaks for itself, but there is room for improvement and innovation. As indicated in the chart below, CACFP providers face a number of challenges.<sup>326</sup>

Distribution of Reasons that Providers Considered Dropping Out of the CACFP

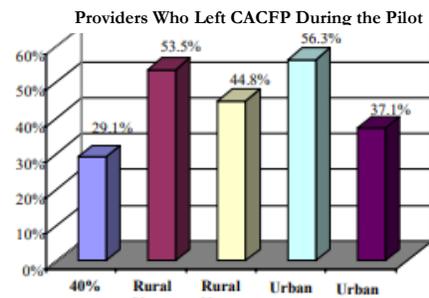


<sup>\*</sup>Does not include Head Start centers since their participation is required by the Head Start regulations.  
<sup>†</sup>Includes only those reasons cited by at least 10% of all providers. Additional detail is provided in Volume II, Exhibit 2.76.

Source: Glantz et al., "Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study."

The following program improvements may help alleviate providers’ concerns:

- **Lower the area eligibility threshold to 40%**
  - Similar to the summer food service programs and afterschool nutrition programs, the area-eligibility threshold for CACFP is too high, particularly in rural areas. And while this proposed policy solution could certainly generate substantial impact, it is not a particularly radical idea. It’s worth noting that “area eligibility was once as low as 33 percent of the FPL.”<sup>327</sup> To this day, no research center or government agency has done a thorough cost-impact



Source: Kirlin et al., "Report to Congress: The Nebraska Rural Area Eligibility Determination Pilot for the CACFP."

analysis on lowering the threshold to 40%: The Center for American Progress, for example, writes that lowering the threshold to 40% could “result in millions more children gaining easier access to early childhood opportunities” but they fail to provide any more comprehensive analysis.<sup>328</sup> However, in a 2005-2007 pilot program in Nebraska, the USDA concluded that while lowering the area eligibility threshold to 40% did not encourage many new providers to join the program, the lowered threshold did significantly reduce departure rates compared to other groups.<sup>329</sup> See the chart above for further detail.

- **Raise reimbursement rates per IOM recommendations – increase by \$0.26 for breakfast, by \$0.24 for lunch, and by \$0.96 for snacks**
  - Though the mandated 2017 meal pattern changes were designed to be cost neutral, many CACFP providers report current reimbursement rates are too small: A USDA study revealed that 55.4% of CACFP providers have considered dropping out of CACFP due to prohibitively low reimbursement rates.<sup>330</sup> It is not entirely possible to estimate the impact of raising reimbursement rates per the Institute of Medicine’s recommendations. But, the prevailing opinion indicates higher reimbursement rates would likely draw more sponsors into the program and would further increase the nutrition of meals served. Thus, the impact of raising reimbursement rates would likely be quite high. The estimated cost of such changes is approximately \$37 million dollars, but this cost pales in comparison to the larger program costs which total over \$3 billion.<sup>331</sup>
- **Allow child care centers and homes to serve a third meal service for children in care for 8 or more hours**
  - As currently structured, CACFP does little to address the growing prevalence of nontraditional and longer work hours for low-income families. Yet according to the Center for American Progress, 11 million children (aged 5 and under) are spending, on average, 35 hours per week in the care of someone other than a parent.<sup>332</sup> By only reimbursing CACFP providers for two meals and one snack per child, CACFP is not adequately addressing the needs of those children who may be in childcare for eight hours or more. It’s worth noting that the suggestion that centers be reimbursed for up to three meals and a snack is by no means unprecedented. Currently, emergency shelters may be reimbursed for three meals and prior to 1996 Welfare Reform, CACFP centers were, in fact, able to claim a reimbursement for a third meal.<sup>333</sup> In 1995, prior to these cuts, 26% of providers served two meals and two snacks. If we assume a similar participation rate in 2018, 44,001.8 centers would be serving a third meal to 1,150,983.08 kids. An additional meal served at the free rate to this population would cost \$2,831,418.

### *BEST PRACTICES FROM OTHER STATES*

On the state level, there exist a plethora of best-practices in CACFP. As pointed out by FRAC, states across the country are going above and beyond federal meal pattern requirements<sup>334</sup> and the Center for Disease Control and Prevention notes that 29 states encourage enhanced nutrition standards.<sup>335</sup> The State of Obesity, a Robert Wood Johnson Foundation, also notes that 23 states and Washington D.C. “connect their ECE licensing standards to CACFP.”<sup>336</sup> Meanwhile, in New

Jersey, the New Jersey Child Nutrition Program provides technical assistance and funding opportunities for centers participating in CACFP.<sup>337</sup>

Finally, the Healthy Tots Act of 2014 in the District of Columbia represents one of the most robust commitments to CACFP and early child care across the country. Passed in October of 2014, the HTA provided 3.2 million dollars in local funds for CACFP participating child care centers to:<sup>338</sup>

- Adopt higher nutritional standards than the national standards, including serving local produce (25 cents per child per day in addition to the federal reimbursement).
- Serve three meals.
- Apply for grants for physical activity, gardens, nutrition education and Farm-to-Preschool programs.

As of October 2018, no comprehensive impact evaluation has been completed. However, notes from a food procurement working group meeting indicate that the majority of eligible institutions were participating as of November 2016.<sup>339</sup>

## CONCLUSION

As this report has demonstrated, the National School Lunch Program, School Breakfast Program, Fresh Fruits and Vegetables Program, Special Milk Program, Summer Food Service Program, Afterschool Nutrition Programs, Special Supplemental Nutrition Program and Farmer's Market Nutrition Program for Women, Infants, and Children (WIC), and the Child and Adult Care Food Program all play vital roles in the fight against childhood hunger. Yet with 12.5 million children experiencing food insecurity, and an obesity epidemic costing the country \$14 billion every year, it is clear that our fight is far from complete.

This report has provided a thorough overview of America's child nutrition programs and their problems, but it is the possibilities that should excite us the most. A hungry-free America for all children – an America that is truly in line with our values – is well within our grasp. It is up to each and every one of us to ensure that our vision comes to fruition, turning all the many, many possibilities into realities.

## **APPENDIX: LIST OF ALL SUGGESTED PROGRAM IMPROVEMENTS**

### **Program Improvements for the National School Lunch Program and School Breakfast Program:**

- Raise reimbursement rates for breakfast and lunch
- Eliminate reduced-price fees, effectively providing free meals to all kids under 185% of the federal poverty line
- Continue to support the expansion of CEP by expanding direct certification to Medicaid, LIHEAP, and HUD
- Return to the Healthy, Hunger-Free Kids Act nutrition standards established in 2010
- Offer funding for plate waste education and reduction in schools
- Expand Farm to School Program
- *For the SBP:* Provide grants for start-up costs to schools hoping to install an alternative breakfast model

### **Program Improvements for the Fresh Fruit and Vegetable Program:**

- Expand the Fresh Fruit and Vegetable Program to include middle and high schools

### **Program Improvements for the Special Milk Program:**

- Expand eligibility for free milk to include reduced-price students (i.e. expand eligibility for free milk from 130% to 185% of FPL)

### **Program Improvements for the Afterschool Nutrition Programs:**

- Lower the area eligibility threshold to 40%
- Allow sites to move beyond school level data to determine eligibility, using the Summer Food Service Program eligibility requirements as a guideline
- Streamline the Summer Food Service Program application process and the Afterschool Nutrition application process, allowing sites to more seamlessly offer services 365 days a year
- Increase access to suppers by allowing them to be served through NSLP

### **Program Improvements for the Summer Meals Programs:**

- Lower the area eligibility threshold to 40%
- Expand Summer EBTC
- Provide a better process for waiving the congregate feeding rule for rural areas and areas with safety concerns
- Update meal patterns (particularly for teenagers) and raise reimbursement rates
- Authorize pilot to reimburse sponsors for adult meals
- Allow sites to serve a third meal

**Program Improvements for the Special Supplemental Nutrition Program for Women, Infants, and Children:**

- Implement the Institute of Medicine’s Recommendations for WIC Food Packages
- Give states the option to extend eligibility for children to age 6
- Give states the option to certify infants for two years

**Program Improvements for the WIC Farmers’ Market Nutrition Program:**

- Increase funding for WIC FMNP
- Offer additional grant funding to support initiatives for states trying to achieve higher redemption rates in WIC FMNP

**Program Improvements for CACFP:**

- Lower the area eligibility threshold to 40%
- Raise reimbursement rates per IOM recommendations – increase by \$0.26 for breakfast, by \$0.24 for lunch, and by \$0.96 for snacks
- Allow child care centers and homes to serve a third meal service for children in care for 8 or more hours

# ENDNOTES

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- <sup>1</sup> Cook, John, and Karen Jeng. "Child Food Insecurity: The Economic Impact on Our Nation." Feeding America, 2009. <https://www.nokidhungry.org/sites/default/files/child-economy-study.pdf>.
- <sup>2</sup> McLaughlin, Katie A., Jennifer Greif Green, Margarita Alegria, E. Jane Costello, Michael J. Gruber, Nancy A. Sampson, and Ronald C. Kessler. "Food Insecurity and Mental Disorders in a National Sample of U.S. Adolescents." *Journal of the American Academy of Child and Adolescent Psychiatry* 51, no. 12 (December 2012): 1293–1303. <https://doi.org/10.1016/j.jaac.2012.09.009>.
- <sup>3</sup> Waxman, Elaine, Susan Popkin, and Martha Galvez. "Bringing Teens to the Table: A Focus on Food Insecurity in America." Feeding America and Urban Institute, 2015. <https://www.feedingamerica.org/sites/default/files/research/teen-hunger-research/bringing-teens-to-the-table.pdf>.
- <sup>4</sup> "The State of Obesity, Homepage." *The State of Obesity* (blog). Accessed November 8, 2018. <https://stateofobesity.org/>.
- <sup>5</sup> "National and State Obesity Rates, Youth Ages 10-17." Robert Wood Johnson Foundation, October 2018.
- <sup>6</sup> Levine, James A. "Poverty and Obesity in the U.S." *Diabetes* 60, no. 11 (November 2011): 2667–68. <https://doi.org/10.2337/db11-1118>.
- <sup>7</sup> Singh, Gopal, and Michael Kogan. "Childhood Obesity in the United States, 1976-2008: Trends and Current Racial/Ethnic, Socioeconomic, and Geographic Disparities." U.S. Department of Health and Human Services, 2010. <http://habitustech.com/wp-content/uploads/PDFs/Childhood-obesity-in-the-USA-1976-2008.pdf>.
- <sup>8</sup> Hopkins and Gunther, "A Historical Review of Changes in Nutrition Standards of USDA Child Meal Programs Relative to Research Findings on the Nutritional Adequacy of Program Meals and the Diet and Nutritional Health of Participants."
- <sup>9</sup> Ibid
- <sup>10</sup> Ibid
- <sup>11</sup> Aussenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer"
- <sup>12</sup> Ibid
- <sup>13</sup> "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs."
- <sup>14</sup> Aussenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."
- <sup>15</sup> Ibid
- <sup>16</sup> Ibid
- <sup>17</sup> Ralston, Katherine, and Constance Newman. "A Look at What's Driving Lower Purchases of School Lunches." *Amber Waves: The Economics of Food, Farming, Natural Resources, & Rural America*, October 2015, 1–9.
- <sup>18</sup> Gundersen, Craig, Brent Kreider, and John Pepper. "The Impact of the National School Lunch Program on Child Health: A Nonparametric Bounds Analysis." *Journal of Econometrics*, Annals Issue on "Identification and Decisions", in Honor of Chuck Manski's 60th Birthday, 166, no. 1 (January 1, 2012): 79–91. <https://doi.org/10.1016/j.jeconom.2011.06.007>.
- <sup>19</sup> Arteaga, Irma, and Colleen Heflin. "Participation in the National School Lunch Program and Food Security: An Analysis of Transitions into Kindergarten." *Children and Youth Services Review* 47 (December 1, 2014): 224–30. <https://doi.org/10.1016/j.childyouth.2014.09.014>.
- <sup>20</sup> Bureau, US Census. "The Supplemental Poverty Measure: 2017." Accessed November 5, 2018. <https://www.census.gov/library/publications/2018/demo/p60-265.html>.
- <sup>21</sup> Clark, Melissa A., and Mary Kay Fox. "Nutritional Quality of the Diets of US Public School Children and the Role of the School Meal Programs." *Journal of the American Dietetic Association* 109, no. 2 Suppl (February 2009): S44-56. <https://doi.org/10.1016/j.jada.2008.10.060>.
- <sup>22</sup> Vernarelli, Jacqueline A., and Brady O'Brien. "A Vote for School Lunches: School Lunches Provide Superior Nutrient Quality than Lunches Obtained from Other Sources in a Nationally Representative Sample of US Children." *Nutrients* 9, no. 9 (August 24, 2017). <https://doi.org/10.3390/nu9090924>.
- <sup>23</sup> Condon, Elizabeth M., Mary Kay Crepinsek, and Mary Kay Fox. "School Meals: Types of Foods Offered to and Consumed by Children at Lunch and Breakfast." *Journal of the American Dietetic Association* 109, no. 2 Suppl (February 2009): S67-78. <https://doi.org/10.1016/j.jada.2008.10.062>.
- <sup>24</sup> Hinrichs, Peter. "The Effects of the National School Lunch Program on Education and Health." *Journal of Policy Analysis and Management: [The Journal of the Association for Public Policy Analysis and Management]* 29, no. 3 (2010): 479–505.
- <sup>25</sup> Alex-Petersen, Jesper, Petter Lundborg, and Dan-Olof Rooth. "Long-Term Effects of Childhood Nutrition: Evidence from a School Lunch Reform." 2017, 57.
- <sup>26</sup> Ptomey, Lauren T., Felicia L. Steger, Matthew M. Schubert, Jaehoon Lee, Erik A. Willis, Debra K. Sullivan, Amanda N. Szabo-Reed, Richard A. Washburn, and Joseph E. Donnelly. "Breakfast Intake and Composition Is Associated with Superior Academic Achievement in Elementary Schoolchildren." *Journal of the American College of Nutrition* 35, no. 4 (May 18, 2016): 326–33. <https://doi.org/10.1080/07315724.2015.1048381>.
- <sup>27</sup> Pollitt, E., S. Cueto, and E. R. Jacoby. "Fasting and Cognition in Well- and Undernourished Schoolchildren: A Review of Three Experimental Studies." *The American Journal of Clinical Nutrition* 67, no. 4 (April 1, 1998): 779S-784S. <https://doi.org/10.1093/ajcn/67.4.779S>.
- <sup>28</sup> Deshmukh-Taskar, Priya R., Theresa A. Nicklas, Carol E. O'Neil, Debra R. Keast, John D. Radcliffe, and Susan Cho. "The Relationship of Breakfast Skipping and Type of Breakfast Consumption with Nutrient Intake and Weight Status in Children and Adolescents: The National Health and Nutrition Examination Survey 1999-2006." *Journal of the American Dietetic Association* 110, no. 6 (June 2010): 869–78. <https://doi.org/10.1016/j.jada.2010.03.023>.
- <sup>29</sup> Rampersaud, Gail C., Mark A. Pereira, Beverly L. Girard, Judi Adams, and Jordan D. Metz. "Breakfast Habits, Nutritional Status, Body Weight, and Academic Performance in Children and Adolescents." *Journal of the American Dietetic Association* 105, no. 5 (May 1, 2005): 743–60. <https://doi.org/10.1016/j.jada.2005.02.007>.
- <sup>30</sup> "Hunger in Our Schools: How Kids in America Are Going Hungry and What We Can Do." No Kid Hungry, Spring 2017. [https://www.nokidhungry.org/sites/default/files/pdfs/HIOS\\_2017.pdf](https://www.nokidhungry.org/sites/default/files/pdfs/HIOS_2017.pdf).

- <sup>31</sup> Bartfeld, Judith S., and Jeong-Hee Ryu. "The School Breakfast Program and Breakfast-Skipping among Wisconsin Elementary School Children." *Social Service Review* 85, no. 4 (2011): 619–34. <https://doi.org/10.1086/663635>.
- <sup>32</sup> Basch, Charles E. "Breakfast and the Achievement Gap Among Urban Minority Youth." *Journal of School Health* 81, no. 10 (October 1, 2011): 635–40. <https://doi.org/10.1111/j.1746-1561.2011.00638.x>.
- <sup>33</sup> "School Breakfast Program (SBP): Program History," July 26, 2013. <https://www.fns.usda.gov/sbp/program-history>.
- <sup>34</sup> Ibid
- <sup>35</sup> Ibid
- <sup>36</sup> Ausenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer"
- <sup>37</sup> "Reimbursement Rates and Income Guidelines for the Federal Child Nutrition Programs."
- <sup>38</sup> See Project Bread's CNOP Quick Guides for more information
- <sup>39</sup> Philbin, Etienne, and Randy Rosso. "School Breakfast Scorecard: School Year 2016-2017." Food Research & Action Center, February 2018. <http://www.frac.org/wp-content/uploads/school-breakfast-scorecard-sy-2016-2017.pdf>.
- <sup>40</sup> Ausenberg and Billings, "School Meals Programs and Other USDA Child Nutrition Programs: A Primer"
- <sup>41</sup> Ibid
- <sup>42</sup> Ibid
- <sup>43</sup> Gleason, Philip M., and Allison Hedley Dodd. "School Breakfast Program but Not School Lunch Program Participation Is Associated with Lower Body Mass Index." *Journal of the American Dietetic Association* 109, no. 2 Suppl (February 2009): S118-128. <https://doi.org/10.1016/j.jada.2008.10.058>.
- <sup>44</sup> Millimet, Daniel L, and Rusty Tchernis. "Estimation of Treatment Effects Without an Exclusion Restriction: With an Application to the Analysis of the School Breakfast Program." Working Paper. National Bureau of Economic Research, November 2009. <https://doi.org/10.3386/w15539>.
- <sup>45</sup> Judi Bartfeld [et. *The School Breakfast Program: Participation and Impacts*. [Washington, D.C.]: U.S. Dept. of Agriculture, Economic Research Service, 2009. [https://catalyst.library.jhu.edu/catalog/bib\\_4060713](https://catalyst.library.jhu.edu/catalog/bib_4060713).
- <sup>46</sup> Fletcher, Jason, and David Frisvold. "The Relationship between the School Breakfast Program and Food Insecurity." *The Journal of Consumer Affairs* Volume 51, Number 3 (Fall 2017): 481–500.
- <sup>47</sup> Bhattacharya, Jayanta, Janet Currie, and Steven Haider. "Breakfast of Champions? The School Breakfast Program and the Nutrition of Children and Families." Working Paper. National Bureau of Economic Research, July 2004. <https://doi.org/10.3386/w10608>.
- <sup>48</sup> "No Kid Hungry Starts With Breakfast." No Kid Hungry, Deloitte, n.d. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/No%20Kid%20Hungry%20Starts%20with%20Breakfast.pdf>.
- <sup>49</sup> Murphy, J. Michael, Maria E. Pagano, Joan Nachmani, Peter Sperling, Shirley Kane, and Ronald E. Kleinman. "The Relationship of School Breakfast to Psychosocial and Academic Functioning: Cross-Sectional and Longitudinal Observations in an Inner-City School Sample." *Archives of Pediatrics & Adolescent Medicine* 152, no. 9 (September 1, 1998): 899–907.
- <sup>50</sup> Frisvold, David. "Nutrition and Cognitive Achievement: An Evaluation of the School Breakfast Program - ScienceDirect." Accessed November 12, 2018. <https://www.sciencedirect-com.proxy1.library.jhu.edu/science/article/pii/S0047272714002497>.
- <sup>51</sup> Clippinger, Emma, Emily Broad Leib, Kelliann Blazek, Alli Condra, Katie Carey, Emily Cole, and Alex Leone. "Child Nutrition Act Reauthorization 2015/16: School Food." Harvard Food Law and Policy Clinic, January 2016. [https://www.chlpi.org/wp-content/uploads/2016/01/FLPC\\_Child-Nutrition-Reauthorization-Policy-Brief-Jan-2016.pdf](https://www.chlpi.org/wp-content/uploads/2016/01/FLPC_Child-Nutrition-Reauthorization-Policy-Brief-Jan-2016.pdf).
- <sup>52</sup> Ibid
- <sup>53</sup> Murdoch, Jim, Angela Campbell, Elizabeth Condon, Mary Kay Fox, Roderick Harrison, Morgan Miller, Katherine Niland, and Yiqi Shen. "Special Nutrition Program Operations Study, School Year 2013-14." Food and Nutrition Service, October 2016. <https://fns-prod.azureedge.net/sites/default/files/ops/SNOPSyr3.pdf>.
- <sup>54</sup> Campbell, Shelia, and Elizabeth Delisile. "Child Nutrition Programs: Spending and Policy Options" Congressional Budget Office, September 2015. <https://www.cbo.gov/publication/50737>.
- <sup>55</sup> Ibid
- <sup>56</sup> United States Government Accountability Office. "School Meal Programs: Experiences of the States and Districts That Eliminated Reduced-Price Fees," July 2009. <https://www.gao.gov/assets/300/292555.pdf>.
- <sup>57</sup> C. Logan et al. (2013). Community Eligibility Provision Evaluation Final Report, U.S. Department of Agriculture. <http://www.fns.usda.gov/sites/default/files/CEPEvaluation.pdf>
- <sup>58</sup> "Year 2 Demonstration Impacts of Using Medicaid Data to Directly Certify Students for Free School Meals | Food and Nutrition Service." Accessed November 5, 2018. <https://www.fns.usda.gov/year-2-demonstration-impacts-using-medicaid-data-directly-certify-students-free-school-meals>.
- <sup>59</sup> Ibid
- <sup>60</sup> "Examining the Potential to Expand Data Matching in the School Meal Program Eligibility and Verification Processes | Food and Nutrition Service." Accessed November 5, 2018. <https://www.fns.usda.gov/examining-potential-expand-data-matching-school-meal-program-eligibility-and-verification-processes>.
- <sup>61</sup> Gurley, Kristie I. "For the Health of It: How the Quantified Health Benefits of the Usda Nutrition Standards Justify Reauthorization and Increased Funding for School Meal Reimbursement." *Harvard Journal on Legislation* 53, no. 1 (January 2016): 387–415.
- <sup>62</sup> "Trump Administration Rolls Back Michelle Obama's Healthy School Lunch Push." NPR.org. Accessed February 5, 2019. <https://www.npr.org/2017/05/01/526451207/trump-administration-rolls-back-2-of-michelle-obamas-signature-initiatives>.
- <sup>63</sup> Broad Leib, Emily, Christina Rice, Alyssa Chan, Maya Cohen, Keshav Dimri, Molly Malavey, Katherine Sandson, and Dominique Trudelle. "Opportunities to Reduce Food Waste in the 2018 Farm Bill." Harvard Food Law and Policy Clinic, May 2017.
- <sup>64</sup> Blondin, Stacy A., Holly Carmichael Djang, Nesly Metayer, Stephanie Anzman-Frasca, and Christina D. Economos. "It's Just so Much Waste." A Qualitative Investigation of Food Waste in a Universal Free School Breakfast Program." *Public Health Nutrition* 18, no. 9 (June 2015): 1565–77. <https://doi.org/10.1017/S1368980014002948>.

- <sup>65</sup> Blondin, Stacy A., Sean B. Cash, Jeanne P. Goldberg, Timothy S. Griffin, and Christina D. Economos. “Nutritional, Economic, and Environmental Costs of Milk Waste in a Classroom School Breakfast Program.” *American Journal of Public Health* 107, no. 4 (April 2017): 590–92. <https://doi.org/10.2105/AJPH.2016.303647>.
- <sup>66</sup> Broad Leib, Emily, Christina Rice, Alyssa Chan, Maya Cohen, Keshav Dimri, Molly Malavey, Katherine Sandson, and Dominique Trudelle. “Opportunities to Reduce Food Waste in the 2018 Farm Bill.” Harvard Food Law and Policy Clinic, May 2017.
- <sup>67</sup> Rouse, Steele. “Renewing the Healthy, Hunger Free Kids Act and Strengthening the Farm to School Program.” *Journal of Law & Education* 47, no. 1 (Winter 2018): 177–87.
- <sup>68</sup> Ibid
- <sup>69</sup> Ibid
- <sup>70</sup> Child Nutrition Outreach Program, “Quick Guides” Project Bread.2018
- <sup>71</sup> Sanderson, Mieka, Crystal FitzSimons, Wendy Forbes, and Beverly Hutton. “School Breakfast After the Bell: Equipping Students for Academic Success.” Food Research & Action Center, National Association of Secondary School Principals, November 2015. <http://frac.org/wp-content/uploads/secondary-principals-bic-report.pdf>.
- <sup>72</sup> Clippinger et al., “Child Nutrition Act Reauthorization 2015/16: School Food.”
- <sup>73</sup> Hilleren, Heather. “School Breakfast Program Cost/Benefit Analysis: Achieving a Profitable SBP.” GreenLeaf Market, 2007. [https://dpi.wi.gov/sites/default/files/imce/school-nutrition/pdf/sbp\\_cost\\_benefit\\_analysis.pdf](https://dpi.wi.gov/sites/default/files/imce/school-nutrition/pdf/sbp_cost_benefit_analysis.pdf).
- <sup>74</sup> Long, Michael W., Kathryn E. Henderson, and Marlene B. Schwartz. “Evaluating the Impact of a Connecticut Program to Reduce Availability of Unhealthy Competitive Food in Schools.” *The Journal of School Health* 80, no. 10 (October 2010): 478–86. <https://doi.org/10.1111/j.1746-1561.2010.00531.x>.
- <sup>75</sup> Ibid
- <sup>76</sup> Ruiz, Teresa, Shirley Turner, Pamela Lampitt, Patricia Jones, and Benjie Wimberly. Requires certain school districts to submit report on nonparticipation in “Community Eligibility Provision” of National School Lunch and School Breakfast Programs, Pub. L. No. NJ S1895 (2018). <https://legiscan.com/NJ/sponsors/S1895/2018>.
- <sup>77</sup> Schwartz, Amy, and Michah Rothbart. “Let Them Eat Lunch: The Impact of Universal Free Meals on Student Performance.” *Center for Policy Research*, December 1, 2017. <https://surface.syr.edu/cpr/235>.
- <sup>78</sup> Ibid
- <sup>79</sup> Baker, “Denying Food and Shaming Children: Unpaid School Meal Policies in Massachusetts.”
- <sup>80</sup> Bhatia, Rajiv, Paula Jones, and Zetta Reicker. “Competitive Foods, Discrimination, and Participation in the National School Lunch Program.” *American Journal of Public Health* 101, no. 8 (August 2011): 1380–86. <https://doi.org/10.2105/AJPH.2011.300134>.
- <sup>81</sup> “Research | Smarter Lunchrooms Movement.” Accessed November 6, 2018. <https://www.smarterlunchrooms.org/about/research>.
- <sup>82</sup> Murdoch et al., “Special Nutrition Program Operations Study, School Year 2013-14.”
- <sup>83</sup> Smarter Lunchrooms Movement, National Office. “Smarter Lunchrooms Scorecard Literature Review,” March 15, 2018. <https://www.smarterlunchrooms.org/sites/default/files/documents/SLM%20Scorecard%20Lit%20Review%20%28Non-Cornell%29%20with%20Intro.%2003-15-2018.pdf>.
- <sup>84</sup> Bergman EA, et al “The relationship between the length of the lunch period and nutrient consumption in the elementary school lunch setting.” *J Child Nutr Manage*, 28(2): October 2004
- <sup>85</sup> Cohen, Juliana F.W., Jaquelyn L. Jahn, Scott Richardson, Sarah A. Cluggish, Ellen Parker, and Eric B. Rimm. “The Amount of Time to Eat Lunch Is Associated with Children’s Selection and Consumption of School Meal Entrée, Fruits, Vegetable, and Milk.” *Journal of the Academy of Nutrition and Dietetics* 116, no. 1 (January 2016): 123–28. <https://doi.org/10.1016/j.jand.2015.07.019>.
- <sup>86</sup> “School Breakfast | Center for Best Practices.” Accessed November 14, 2018. <http://bestpractices.nokidhungry.org/policy-and-advocacy/school-breakfast>.
- <sup>87</sup> Ibid
- <sup>88</sup> Ibid
- <sup>89</sup> Ibid
- <sup>90</sup> Ibid
- <sup>91</sup> “Breakfast After the Bell: Policy Solutions From Across the U.S.”
- <sup>92</sup> Ibid
- <sup>93</sup> Wass, Tara, Sarah McGuire, and Kaia Gallagher. “Breakfast in the Classroom: Student Outcome Study.” Center for Research Strategies, November 9, 2015. <http://foodservices.dpsk12.org/pdfs/BICAcademicFindings-1-5-16.pdf>.
- <sup>94</sup> Cite
- <sup>95</sup> Leos-Urbel, Jacob, Amy Ellen Schwartz, Meryle Weinstein, and Sean Corcoran. “Not Just for Poor Kids: The Impact of Universal Free School Breakfast on Meal Participation and Student Outcomes.” *Economics of Education Review* 36 (October 1, 2013): 88–107. <https://doi.org/10.1016/j.econedurev.2013.06.007>.
- <sup>96</sup> “Promoting Fruits and Vegetables in Schools: Wellness Policy Opportunities.” Produce for Better Health Foundation, 2005. <https://fns-prod.azureedge.net/sites/default/files/wellnesspolicies.pdf>.
- <sup>97</sup> Ibid
- <sup>98</sup> Neumark-Sztainer, Dianne, Mary Story, Peter J. Hannan, and Jillian Croll. “Overweight Status and Eating Patterns Among Adolescents: Where Do Youths Stand in Comparison With the Healthy People 2010 Objectives?” *American Journal of Public Health* 92, no. 5 (May 2002): 844–51.
- <sup>99</sup> Ibid
- <sup>100</sup> Lorson, Barbara, Hugo Melgar-Quinonez, and Christopher Taylor. “Correlates of Fruit and Vegetable Intakes in US Children.” *Journal of the American Dietetic Association*, 2009. [https://ac-els-cdn-com.proxy1.library.jhu.edu/S0002822308021858/1-s2.0-S0002822308021858-main.pdf?\\_tid=e0ff5aa9-5e8b-4761-83ec-0b9e3a17daca&acdnat=1542741219\\_397c7b8e5f22b60433333fcd447995f8](https://ac-els-cdn-com.proxy1.library.jhu.edu/S0002822308021858/1-s2.0-S0002822308021858-main.pdf?_tid=e0ff5aa9-5e8b-4761-83ec-0b9e3a17daca&acdnat=1542741219_397c7b8e5f22b60433333fcd447995f8).
- <sup>101</sup> “Fresh Fruit and Vegetable Program: Program History.” Accessed November 20, 2018. <https://www.fns.usda.gov/ffvp/program-history>.
- <sup>102</sup> Ibid
- <sup>103</sup> Ibid

- <sup>104</sup> Bartlett, Susan, Lauren Olsho, Jacob Klerman, Kelly Patlan, Michelle Blocklin, Patty Connor, Karen Webb, Lorrene Ritchie, Patricia Wakimoto, and Patricia Crawford. "Evaluation of the Fresh Fruit and Vegetable Program." Food and Nutrition Service, March 2013. <https://www.fns.usda.gov/evaluation-fresh-fruit-and-vegetable-program>.
- <sup>105</sup> "The Fresh Fruit and Vegetable Program Fact Sheet." United States Department of Agriculture, December 2017. <https://fns-prod.azureedge.net/sites/default/files/cn/FFVPFactSheet.pdf>.
- <sup>106</sup> Ibid
- <sup>107</sup> Ibid
- <sup>108</sup> Ibid
- <sup>109</sup> Bartlett, Susan, Lauren Olsho, Jacob Klerman, Kelly Patlan, Michelle Blocklin, Patty Connor, Karen Webb, Lorrene Ritchie, Patricia Wakimoto, and Patricia Crawford. "Evaluation of the Fresh Fruit and Vegetable Program."
- <sup>110</sup> Ibid
- <sup>111</sup> "Memo Code: SP 35-2017, Fresh Fruit and Vegetable Program (FFVP): Revised FY 2017 Funding Allocation and FY 2018 Funding Allocation." United States Department of Agriculture, June 16, 2017. <https://fns-prod.azureedge.net/sites/default/files/cn/SP35-2017os.pdf>.
- <sup>112</sup> "Fresh Fruit and Vegetable Program." United Fresh Produce Association. Accessed November 20, 2018. <https://www.unitedfresh.org/nutrition/fresh-fruit-vegetable-program/>.
- <sup>113</sup> Bartlett, Susan, Lauren Olsho, Jacob Klerman, Kelly Patlan, Michelle Blocklin, Patty Connor, Karen Webb, Lorrene Ritchie, Patricia Wakimoto, and Patricia Crawford. "Evaluation of the Fresh Fruit and Vegetable Program."
- <sup>114</sup> Ibid
- <sup>115</sup> Ibid
- <sup>116</sup> Ohri-Vachaspati, Punam, Elizabeth Dachenhaus, Jessie Gruner, Kristina Mollner, Eric B. Hekler, and Michael Todd. "Fresh Fruit and Vegetable Program and Requests for Fruits and Vegetables Outside School Settings." *Journal of the Academy of Nutrition and Dietetics* 118, no. 8 (August 1, 2018): 1408–16. <https://doi.org/10.1016/j.jand.2017.10.013>.
- <sup>117</sup> Qian, Yiwei, Rodolfo M. Nayga, Michael R. Thomsen, and Heather L. Rouse. "The Effect of the Fresh Fruit and Vegetable Program on Childhood Obesity." *Applied Economic Perspectives and Policy* 38, no. 2 (June 1, 2016): 260–75. <https://doi.org/10.1093/aep/ppv017>.
- <sup>118</sup> Bartlett, Susan, Lauren Olsho, Jacob Klerman, Kelly Patlan, Michelle Blocklin, Patty Connor, Karen Webb, Lorrene Ritchie, Patricia Wakimoto, and Patricia Crawford. "Evaluation of the Fresh Fruit and Vegetable Program."
- <sup>119</sup> See, for example, Popkin, Susan, Molly Scott, and Martha Galvez. "Impossible Choices: Teens and Food Insecurity in America | Urban Institute." Urban Institute. Accessed November 26, 2018. <https://www.urban.org/research/publication/impossible-choices-teens-and-food-insecurity-america>.
- <sup>120</sup> Coyle, Karin K., Susan Potter, Doris Schneider, Gary May, Leah E. Robin, Jennifer Seymour, and Karen Debot. "Distributing Free Fresh Fruit and Vegetables at School: Results of a Pilot Outcome Evaluation." *Public Health Reports* 124, no. 5 (2009): 660–69.
- <sup>121</sup> Bartlett, Susan, Lauren Olsho, Jacob Klerman, Kelly Patlan, Michelle Blocklin, Patty Connor, Karen Webb, Lorrene Ritchie, Patricia Wakimoto, and Patricia Crawford. "Evaluation of the Fresh Fruit and Vegetable Program."
- <sup>122</sup> "Farm To School | Fresh Fruit and Vegetable Program." Accessed November 20, 2018. <https://www.farmtoschool.nj.gov/agriculture/farmtoschool/schools/fresh-fruit-vegetable/>.
- <sup>123</sup> "US (NJ): 144 Schools Offering Fresh Fruit and Vegetable Program." Accessed November 20, 2018. [www.hortidaily.com/article/9039184-us-nj-schools-offering-fresh-fruit-and-vegetable-program/](http://www.hortidaily.com/article/9039184-us-nj-schools-offering-fresh-fruit-and-vegetable-program/).
- <sup>124</sup> Wiley, Andrea S. "Does Milk Make Children Grow? Relationships between Milk Consumption and Height in NHANES 1999–2002." *American Journal of Human Biology* 17, no. 4 (July 1, 2005): 425–41. <https://doi.org/10.1002/ajhb.20411>.
- <sup>125</sup> Black, Ruth, Sheila Williams, Ianthe Jones, and Ailsa Goulding. "Children Who Avoid Drinking Cow Milk Have Low Dietary Calcium Intakes and Poor Bone Health." *American Society for Clinical Nutrition*, 2002. <https://www.ncbi.nlm.nih.gov/pubmed/12198017>.
- <sup>126</sup> Weaver, Connie M. "Milk Consumption and Bone Health." *JAMA Pediatrics* 168, no. 1 (January 1, 2014): 12–13. <https://doi.org/10.1001/jamapediatrics.2013.4239>.
- <sup>127</sup> "Why Is Milk Good For You? | The Facts About Milk." Milk Truth. Accessed November 19, 2018. <http://milktruth.com/milk-facts/>.
- <sup>128</sup> "Milk Matters Online Lesson Resources Available for Teachers." <http://www.nichd.nih.gov/>. Accessed November 19, 2018. [http://www.nichd.nih.gov/newsroom/resources/spotlight/092507\\_mm\\_online\\_resources](http://www.nichd.nih.gov/newsroom/resources/spotlight/092507_mm_online_resources).
- <sup>129</sup> "The Special Milk Program: An Introduction - EXtension." Accessed November 19, 2018. <https://articles.extension.org/pages/68764/the-special-milk-program-an-introduction>.
- <sup>130</sup> Fox, Mary Kay, William Hamilton, and Biing-Hwan Lin. "Effects of Food Assistance and Nutrition Programs on Nutrition and Health: Volume 3, Literature Review," December 2004. <https://www.ers.usda.gov/publications/pub-details/?pubid=46574>.
- <sup>131</sup> Ibid
- <sup>132</sup> Ibid
- <sup>133</sup> "The Special Milk Program: An Introduction - EXtension."
- <sup>134</sup> Aussenberg, Randy, and Kara Billings. "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."
- <sup>135</sup> "The Special Milk Program: An Introduction - EXtension."
- <sup>136</sup> Aussenberg, Randy, and Kara Billings. "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."
- <sup>137</sup> Ibid
- <sup>138</sup> "Child Nutrition Tables | Food and Nutrition Service." Accessed November 19, 2018. <https://fns-prod.azureedge.net/pd/child-nutrition-tables>.
- <sup>139</sup> Aussenberg, Randy, and Kara Billings. "School Meals Programs and Other USDA Child Nutrition Programs: A Primer."
- <sup>140</sup> Fox, Mary Kay, William Hamilton, and Biing-Hwan Lin. "Effects of Food Assistance and Nutrition Programs on Nutrition and Health: Volume 3, Literature Review,"
- <sup>141</sup> Ibid
- <sup>142</sup> Ibid
- <sup>143</sup> Ibid
- <sup>144</sup> Ibid
- <sup>145</sup> Jirka, Barbara, and Jeannie Sneed. "Commodity Foods - Is It Time for Change?" *The Journal of Child Nutrition & Management* Volume 31, no. Issue 2 (Fall 2007).

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[https://schoolnutrition.org/uploadedFiles/5\\_News\\_and\\_Publications/4\\_The\\_Journal\\_of\\_Child\\_Nutrition\\_and\\_Management/Fall\\_2007/4-jirka.pdf](https://schoolnutrition.org/uploadedFiles/5_News_and_Publications/4_The_Journal_of_Child_Nutrition_and_Management/Fall_2007/4-jirka.pdf).

<sup>146</sup> “Schools/Child Nutrition USDA Foods Programs: Nutrition Program Fact Sheet.” United States Department of Agriculture, June 2018. <https://fns-prod.azureedge.net/sites/default/files/fdd/programFactSheet-schcnp.pdf>.

<sup>147</sup> To see the foods available for School Year 2019 please see, “USDA Foods Available for School Year 2019 for Schools and Institutions.” United States Department of Agriculture, March 2018. <https://fns-prod.azureedge.net/sites/default/files/fdd/schools-institutions-foods-available.pdf>.

<sup>148</sup> “State of Origin for USDA Foods in Fiscal Year 2016 | Food and Nutrition Service.” Accessed December 6, 2018. <https://www.fns.usda.gov/fdd/state-origin-usda-foods-fiscal-year-2016>.

<sup>149</sup> “Schools/Child Nutrition USDA Foods Programs: Nutrition Program Fact Sheet.”

<sup>150</sup> Ibid

<sup>151</sup> “2018 Position Paper.” Accessed December 6, 2018. <https://schoolnutrition.org/legislation-policy/action-center/2018-position-paper/>.

<sup>152</sup> “Schools/Child Nutrition USDA Foods Programs: Nutrition Program Fact Sheet.”

<sup>153</sup> Ibid

<sup>154</sup> “USDA Foods in the National School Lunch Program.” Food and Nutrition Service, February 2016. <https://fns-prod.azureedge.net/sites/default/files/fdd/NSLP-White-Paper.pdf>.

<sup>155</sup> Ibid

<sup>156</sup> Almada, Lorenzo, and Ian McCarthy. “It’s a Cruel Summer: Household Responses to Reductions in Government Nutrition Assistance.” Working Paper. National Bureau of Economic Research, July 2017. <https://doi.org/10.3386/w23633>.

<sup>157</sup> Ibid

<sup>158</sup> Ibid

<sup>159</sup> Nord, Mark, and Kathleen Romig. “Hunger in the Summer.” *Journal of Children and Poverty* 12, no. 2 (September 1, 2006): 141–58. <https://doi.org/10.1080/10796120600879582>.

<sup>160</sup> Huang, Jin, Ellen Barnidge, and Youngmi Kim. “Children Receiving Free or Reduced-Price School Lunch Have Higher Food Insecurity Rates in Summer.” *The Journal of Nutrition* 145, no. 9 (September 2015): 2161–68. <https://doi.org/10.3945/jn.115.214486>.

<sup>161</sup> No Kid Hungry, Share Our Strength. “National Summer Meals Survey Major Findings,” n.d.

<http://bestpractices.nokidhungry.org/sites/default/files/download-resource/National%20Summer%20Meals%20Survey%20Major%20Findings.pdf>.

<sup>162</sup> Ibid

<sup>163</sup> “Program History | Food and Nutrition Service.” Accessed October 30, 2018. <https://www.fns.usda.gov/sfsp/program-history>.

<sup>164</sup> These changes included lowered reimbursement rates and the elimination of a reimbursement for a fourth reimbursement for migrant children. For further information see, “Welfare Reform: Effects of Reduced Reimbursements on the Summer Food Service Program: RCED-99-20.” *GAO Reports*, November 10, 1998, 1.

<sup>165</sup> Ibid

<sup>166</sup> “Frequently Asked Questions | Food and Nutrition Service.” Accessed November 1, 2018. <https://www.fns.usda.gov/sfsp/frequently-asked-questions>.

<sup>167</sup> Note, migrant sites and camps may serve up to 3 meals and camps and migrant sites are not restricted to receiving reimbursements for lunch and supper

<sup>168</sup> For more information on differences between the SFSP and SSO, please see U.S. Department of Agriculture, Food and Nutrition Service. “Comparison of Programs SFSP/NSLP/Seamless Option,” January 22, 2015. [https://fns-prod.azureedge.net/sites/default/files/SFSP\\_SeamlessComparisonChart.pdf](https://fns-prod.azureedge.net/sites/default/files/SFSP_SeamlessComparisonChart.pdf).

<sup>169</sup> For detailed state breakdowns, see “Child Nutrition Tables | Food and Nutrition Service.” Accessed November 1, 2018. <https://www.fns.usda.gov/pd/child-nutrition-tables>.

<sup>170</sup> Office, U. S. Government Accountability. “Summer Meals: Actions Needed to Improve Participation Estimates and Address Program Challenges,” no. GAO-18-369 (July 2, 2018). <https://www.gao.gov/products/GAO-18-369>.

<sup>171</sup> “Summer Meals Survey | FRAC and Share Our Strength.” Accessed November 1, 2018. <http://www.summermealsurvey.org>.

<sup>172</sup> Ibid

<sup>173</sup> Ibid

<sup>174</sup> Rosso, Randy, Alex Boyd, Crystal Fitzsimmons, and Clarissa Hayes. “Hunger Doesn’t Take a Vacation: Summer Breakfast Status Report 2018.” Food Research & Action Center, June 2018. <http://www.frac.org/wp-content/uploads/frac-summer-breakfast-report-2018.pdf>.

<sup>175</sup> Miller, Daniel P. “Accessibility of Summer Meals and the Food Insecurity of Low-Income Households with Children.” *Public Health Nutrition* 19, no. 11 (August 2016): 2079–89. <https://doi.org/10.1017/S1368980016000033>.

<sup>176</sup> Nord and Romig, “Hunger in the Summer.”

<sup>177</sup> Orovecz, Katie, Erica Pincus, Nell Todd, and Maura Welch. “Summer Nutrition Program Social Impact Analysis.” No Kid Hungry, Deloitte, Arbys Foundation, n.d. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/Summer%20Nutrition%20Program%20Social%20Impact%20Analysis.pdf>.

<sup>178</sup> “Summer Hunger Is Too Expensive to Ignore.” No Kid Hungry, Deloitte, Arbys Foundation, June 30, 2015. [https://www.nokidhungry.org/sites/default/files/NKH\\_MicroReport\\_SummerHunger.pdf](https://www.nokidhungry.org/sites/default/files/NKH_MicroReport_SummerHunger.pdf).

<sup>179</sup> Ibid

<sup>180</sup> Orovecz et al., “Summer Nutrition Program Social Impact Analysis.”

<sup>181</sup> Rosso et al., “Hunger Doesn’t Take a Vacation: Summer Breakfast Status Report 2018.”

<sup>182</sup> Wauchope, Barbara. “Challenges in Serving Rural American Children through the Summer Food Service Program. Issue Brief No. 13.” *Carsey Institute*, January 1, 2010.

<sup>183</sup> Ibid

<sup>184</sup> Ibid

- <sup>185</sup> Collins, Ann, Ronette Briefel, Jacob Klerman, Anne Wolf, Gretchen Rowe, Chris Logan, Ayesha Enver, Syeda Fatima, and Julia Lyskawa. "Summer Electronic Benefit Transfer for Children (SEBTC) Demonstration: Summary Report." Abt Associates and Mathematica Policy Research, May 2016. <https://fns-prod.azureedge.net/sites/default/files/ops/sebtfinalreport.pdf>.
- <sup>186</sup> Ibid
- <sup>187</sup> Ibid
- <sup>188</sup> For further information on transportation issues see, Wilkerson, Rachel, Durwesh Khalfé, and Kathy Krey. "Associations Between Neighborhoods and Summer Meals Sites: Measuring Access to Federal Summer Meals Programs." *Journal of Applied Research on Children: Informing Policy for Children at Risk* 6, no. 2 (January 7, 2016). <https://digitalcommons.library.tmc.edu/childrenatrisk/vol6/iss2/9>
- <sup>189</sup> "Unmet Need in the Summer Meals Program." No Kid Hungry, n.d. [https://www.nokidhungry.org/sites/default/files/pdf/2015/Summer/Unmet\\_Need1-15-15.pdf](https://www.nokidhungry.org/sites/default/files/pdf/2015/Summer/Unmet_Need1-15-15.pdf).
- <sup>190</sup> Office, "Summer Meals."
- <sup>191</sup> Office, "Summer Meals."
- <sup>192</sup> Hopkins, Laura C., and Carolyn Gunther. "A Historical Review of Changes in Nutrition Standards of USDA Child Meal Programs Relative to Research Findings on the Nutritional Adequacy of Program Meals and the Diet and Nutritional Health of Participants: Implications for Future Research and the Summer Food Service Program." *Nutrients* 7, no. 12 (December 4, 2015): 10145–67. <https://doi.org/10.3390/nu7125523>.
- <sup>193</sup> Ibid
- <sup>194</sup> "Why the Family Meal Is Important." *Stanford Children's Health* (blog). Accessed January 7, 2019. <https://www.stanfordchildrens.org/en/topic/default?id=why-the-family-meal-is-important-1-701>.
- <sup>195</sup> Bruce, Janine S., Monica M. De La Cruz, Gala Moreno, and Lisa J. Chamberlain. "Lunch at the Library: Examination of a Community-Based Approach to Addressing Summer Food Insecurity." *Public Health Nutrition* 20, no. 9 (June 2017): 1640–49. <https://doi.org/10.1017/S1368980017000258>.
- <sup>196</sup> Nord, Mark, and Kathleen Romig. "Hunger in the Summer." *Journal of Children and Poverty* 12, no. 2 (September 1, 2006): 141–58. <https://doi.org/10.1080/10796120600879582>.
- <sup>197</sup> Bruce, Janine S., Monica M. De La Cruz, Gala Moreno, and Lisa J. Chamberlain. "Lunch at the Library: Examination of a Community-Based Approach to Addressing Summer Food Insecurity." *Public Health Nutrition* 20, no. 9 (June 2017): 1640–49. <https://doi.org/10.1017/S1368980017000258>.
- <sup>198</sup> U.S. Department of Agriculture, Food and Nutrition Services. "Report on the Summer Food for Children Demonstration Projects for Fiscal Year 2013," December 2013. [https://fns-prod.azureedge.net/sites/default/files/SEBTC\\_2013.pdf](https://fns-prod.azureedge.net/sites/default/files/SEBTC_2013.pdf).
- <sup>199</sup> Ibid
- <sup>200</sup> Ibid
- <sup>201</sup> Ibid
- <sup>202</sup> Elinson, L., Bethel, J., Deak, M. A., Li, S., Koenig, T., Caperna, K., Palan, M. (2014). Evaluation of the Summer Food Service Program Enhancement Demonstrations. 2012 Demonstration Evaluation Report. Prepared by Westat under GSA Contract No. GS-23F-8144H. Project Officer: Chan Chanhatsilpa. Alexandria VA: United States Department of Agriculture, Food and Nutrition Service.
- <sup>203</sup> Ibid
- <sup>204</sup> Ibid
- <sup>205</sup> "Mobile Feeding | Food and Nutrition Service." Accessed November 2, 2018. <https://www.fns.usda.gov/sfsp/mobile-feeding>.
- <sup>206</sup> "Advancing Summer Meals through Collective Impact." Community Wealth Partners, April 2014. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/Collective%20Impact%20Case%20Study.pdf>.
- <sup>207</sup> Ruiz, Teresa, Shirley Turner, Pamela Lampitt, Eliana Marin, and Arthur Barclay. Expands summer meal program to all school districts with 50 percent or more of students eligible for free or reduced price meals., Pub. L. No. NJ S1897 (2018). <https://legiscan.com/NJ/bill/S1897/2018>.
- <sup>208</sup> "Afterschool Meals Survey." No Kid Hungry, Share Our Strength, July 2013. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/National%20Afterschool%20Survey%20Full%20Report.pdf>.
- <sup>209</sup> Ibid
- <sup>210</sup> Ibid
- <sup>211</sup> Cho, Clare, and Joanne Guthrie. "USDA ERS - USDA's After-School Snack Program More Common in Elementary Schools in Poor Urban Areas." Accessed October 10, 2018. <https://www.ers.usda.gov/amber-waves/2016/januaryfebruary/usda-s-after-school-snack-program-more-common-in-elementary-schools-in-poor-urban-areas/>.
- <sup>212</sup> "At-Risk AfterSchool Meals Guide." Child & Adult Care Food Program, United States Department of Agriculture, 2017. <https://fns-prod.azureedge.net/sites/default/files/cacfp/cacfpatriksdesigned.pdf>.
- <sup>213</sup> Hayes, Clarissa, Randy Rosso, and Crystal Fitzsimmons. "Afterschool Suppers: A Snapshot of Participation, 2018 Afterschool Nutrition Report." Food Research & Action Center, n.d. <http://www.frac.org/wp-content/uploads/afterschool-report-october-2018.pdf>.
- <sup>214</sup> "Afterschool Reimbursement Rates." *Food Research & Action Center* (blog). Accessed February 14, 2019. <http://www.frac.org/afterschool-reimbursement-rates>.
- <sup>215</sup> Ibid
- <sup>216</sup> Cho, Clare, and Joanne Guthrie. "USDA ERS - USDA's After-School Snack Program More Common in Elementary Schools in Poor Urban Areas." Accessed October 10, 2018. <https://www.ers.usda.gov/amber-waves/2016/januaryfebruary/usda-s-after-school-snack-program-more-common-in-elementary-schools-in-poor-urban-areas/>.
- <sup>217</sup> Glantz, F.B., Germuth, A.A., Macaluso, T.F., & Della Torre, K. (2018). Findings of the CACFP Sponsor and Provider Study. Prepared by Kokopelli Associates, LLC under Contract No. AG3198-C-13-0012. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- <sup>218</sup> Ibid
- <sup>219</sup> Hayes, Rosso, and Fitzsimmons, "Afterschool Suppers: A Snapshot of Participation, 2018 Afterschool Nutrition Report."
- <sup>220</sup> Kenney, Erica L., S. Bryn Austin, Angie L. Cradock, Catherine M. Giles, Rebekka M. Lee, Kirsten K. Davison, and Steven L. Gortmaker. "Identifying Sources of Children's Consumption of Junk Food in Boston after-School Programs, April-May 2011." *Preventing Chronic Disease* 11 (November 20, 2014): E205. <https://doi.org/10.5888/pcd11.140301>.

- <sup>221</sup> Glantz et al., “Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study | Food and Nutrition Service.”
- <sup>222</sup> U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, CACFP At-Risk Afterschool Meals Best Practices, 2011, by Jennifer Berkold and Sandra Paredes. Project Officer, Richard Hicks. Alexandria, VA: November 2011.
- <sup>223</sup> Lawn, John. “LAUSD Embraces New Supper Meal Program.” *Food Management; Cleveland* 47, no. 12 (December 2012): 11.
- <sup>224</sup> Glantz et al., “Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study | Food and Nutrition Service.”
- <sup>225</sup> Hayes, Rosso, and Fitzsimmons, “Afterschool Suppers: A Snapshot of Participation, 2018 Afterschool Nutrition Report.”
- <sup>226</sup> Glantz, F.B., Germuth, A.A., Macaluso, T.F., & Della Torre, K. (2018). Findings of the CACFP Sponsor and Provider Study. Prepared by Kokopelli Associates, LLC under Contract No. AG3198-C-13-0012. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- <sup>227</sup> Hayes, Clarissa, Randy Rosso, and Crystal Fitzsimmons. “Afterschool Suppers: A Snapshot of Participation, 2018 Afterschool Nutrition Report.” Food Research & Action Center, n.d. <http://www.frac.org/wp-content/uploads/afterschool-report-october-2018.pdf>.
- <sup>228</sup> Hayes, Rosso, and Fitzsimmons, “Afterschool Suppers: A Snapshot of Participation, 2018 Afterschool Nutrition Report.”
- <sup>229</sup> U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, CACFP At-Risk Afterschool Meals Best Practices,
- <sup>230</sup> D.C. Hunger Solutions. “Successes, Key Strategies and Recommendations: The D.C. Public School Experience in Rolling Out the Afterschool Meal Program at 100 Schools,” October 2011. [http://www.dchunger.org/pdf/dc\\_afterschoolmealprogram\\_report\\_oct2011.pdf](http://www.dchunger.org/pdf/dc_afterschoolmealprogram_report_oct2011.pdf).
- <sup>231</sup> “Key Programs Lay Building Blocks for Kids’ Success.” Center on Budget and Policy Priorities, March 16, 2015. <https://www.cbpp.org/blog/key-programs-lay-building-blocks-for-kids-success>.
- <sup>232</sup> “FRAC Research Wire.” Food Research & Action Center, Fall 2018. <http://frac.org/wp-content/uploads/researchwire-fall-2018.pdf?eType=EmailBlastContent&eId=2a51fdac-fcc6-446c-98e0-e0039cdf1ae6#page=6>.
- <sup>233</sup> “Early Childhood Research Brief: The Role of WIC.” No Kid Hungry, 2017 2016. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/WIC%20Early%20Childhood%20Survey%20Brief.pdf>.
- <sup>234</sup> Ibid
- <sup>235</sup> Ibid
- <sup>236</sup> “WIC Program Overview and History.” National WIC Association. Accessed November 30, 2018. <https://www.nwica.org/overview-and-history>.
- <sup>237</sup> Ibid
- <sup>238</sup> Ibid
- <sup>239</sup> Ibid
- <sup>240</sup> “Special Supplemental Nutrition Program for Women, Infants, and Children.” Center on Budget and Policy Priorities, April 26, 2017. <https://www.cbpp.org/sites/default/files/atoms/files/2-9-15PolicyBasics-WIC.pdf>.
- <sup>241</sup> Ibid
- <sup>242</sup> “Frequently Asked Questions about WIC | Food and Nutrition Service.” Accessed November 26, 2018. <https://www.fns.usda.gov/wic/frequently-asked-questions-about-wic>.
- <sup>243</sup> States have the option to restrict eligibility if they wish but at present, no states have done so.
- <sup>244</sup> “Special Supplemental Nutrition Program for Women, Infants, and Children.”
- <sup>245</sup> “WIC Eligibility Priority System | Food and Nutrition Service.” Accessed November 28, 2018. <https://www.fns.usda.gov/wic/wic-eligibility-priority-system>.
- <sup>246</sup> Aussenberg, Randy Alison, and Julia Kotrey. “A Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children.” July 21, 2015: Congressional Research Service, n.d. <https://fas.org/sgp/crs/misc/R44115.pdf>.
- <sup>247</sup> Ibid
- <sup>248</sup> Cates, S., Capogrossi, K., Eicheldinger, C., et al., RTI International, and Sallack, L., and K. Deehy, Altarum Institute. (2016). WIC Nutrition Education Study.
- <sup>249</sup> “WIC (Women, Infants and Children).” *Food Research & Action Center* (blog). Accessed December 3, 2018. <http://frac.org/programs/wic-women-infants-children>.
- <sup>250</sup> Thorn, B., Kline, N., Tadler, C., Budge, E., Wilcox-Cook, E., Michaels, J., Mendelson, M., Patlan, K. L., & Tran, V. (2018). WIC Participant and Program Characteristics 2016. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- <sup>251</sup> “WIC Program Participation and Costs.” United States Department of Agriculture, November 9, 2018. <https://fns-prod.azureedge.net/sites/default/files/pd/wisummary.pdf>.
- <sup>252</sup> “WIC Works: Addressing the Nutrition and Health Needs of Low-Income Families for 40 Years.” Center on Budget and Policy Priorities, May 4, 2015. <https://www.cbpp.org/research/food-assistance/wic-works-addressing-the-nutrition-and-health-needs-of-low-income-families>.
- <sup>253</sup> Robinson, Christina. “Younger Siblings Can Be Good for Your Health: An Examination of Spillover Benefits from the Supplemental Nutrition Program for Women, Infants, and Children (WIC).” *Journal of Family & Economic Issues* 34, no. 2 (June 2013): 172–84. <https://doi.org/10.1007/s10834-012-9325-0>.
- <sup>254</sup> U.S. Department of Agriculture, Food and Nutrition Service, Office of Research, Nutrition and Analysis, Diet Quality of American Young Children by WIC Participation Status: Data from the National Health and Nutrition Examination Survey, 1999-2004, by Nancy Cole and Mary Kay Fox. Project Officer: Jenny Laster Genser. Alexandria, VA: 2008.
- <sup>255</sup> Bolbocean, Corneliu, Frances A Tylavsky, and James E West. “U.S. Safety Net Programs and Early Life Skills Formation: Results from a Prospective Longitudinal Cohort Study.” Working Paper. National Bureau of Economic Research, July 2018. <https://doi.org/10.3386/w24832>.
- <sup>256</sup> Chorniy, Anna V, Janet Currie, and Lyudmyla Sonchak. “Does Prenatal WIC Participation Improve Child Outcomes?” Working Paper. National Bureau of Economic Research, June 2018. <https://doi.org/10.3386/w24691>.
- <sup>257</sup> Latulippe, Marie, Meghan Quirk, Bernice Chu, Alice Vorosmarti, Ambar Saeed, and Ann Yaktine. “Review of WIC Food Packages: Improving Balance and Choice.” The National Academies of Sciences, Engineering, Medicine, January 2017. [http://nationalacademies.org/hmd/~media/Files/Report%20Files/2017/WIC/WIC-highlights.pdf](http://nationalacademies.org/hmd/~/media/Files/Report%20Files/2017/WIC/WIC-highlights.pdf).
- <sup>258</sup> Arteaga, Irma, Colleen Heflin, and Sara Gable. “The Impact of Aging out of WIC on Food Security in Households with Children.” *Children and Youth Services Review* 69 (October 1, 2016): 82–96. <https://doi.org/10.1016/j.childyouth.2016.07.015>.
- <sup>259</sup> Ibid

- <sup>260</sup> Johnson, Paul, David Betson, Lorraine Blatt, and Linda Giannarelli. "Volume II: Appendices: National- and State-Level Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach in 2014, and Updated Estimates for 2005-2013." Urban Institute, October 30, 2017. [https://www.urban.org/research/publication/volume-ii-appendices-national-and-state-level-special-supplemental-nutrition-program-women-infants-and-children-wic-eligibles-and-program-reach-2014-and-updated-estimates-2005-2013/view/full\\_report](https://www.urban.org/research/publication/volume-ii-appendices-national-and-state-level-special-supplemental-nutrition-program-women-infants-and-children-wic-eligibles-and-program-reach-2014-and-updated-estimates-2005-2013/view/full_report).
- <sup>261</sup> "WIC Program Participation and Costs." United States Department of Agriculture, November 9, 2018. <https://fns-prod.azureedge.net/sites/default/files/pd/wisummary.pdf>.
- <sup>262</sup> U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support. National- and State-Level Estimates of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach in 2014, and Updated Estimates for 2005-2013, by Paul Johnson, David Betson, Lorraine Blatt, and Linda Giannarelli. Project Officer: Grant Lovellette. Alexandria, VA: September 2017.
- <sup>263</sup> "Decline in WIC Participation Has Negative Health Implications for Women and Children." *Food Research & Action Center* (blog). Accessed November 29, 2018. <http://www.frac.org/news/decline-wic-participation-negative-health-implications-women-children>.
- <sup>264</sup> Johnson, Paul, David Betson, Lorraine Blatt, and Linda Giannarelli. "Volume II: Appendices: National- and State-Level Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach in 2014, and Updated Estimates for 2005-2013."
- <sup>265</sup> "Tell Congress to Protect and Improve WIC! | National WIC Association." Accessed December 3, 2018. <https://www.nwica.org/blog/tell-congress-to-protect-and-improve-wic#.XAVRm2hKiU>.
- <sup>266</sup> "WICShopper - Apps on Google Play." Accessed November 30, 2018. [https://play.google.com/store/apps/details?id=com.jpma.EBTShopper&hl=en\\_US](https://play.google.com/store/apps/details?id=com.jpma.EBTShopper&hl=en_US).
- <sup>267</sup> "Fall 2018 WIC Research to Practice." National WIC Association. Accessed November 30, 2018. <https://www.nwica.org/fall-2018-wic-research-to-practice>.
- <sup>268</sup> Ibid
- <sup>269</sup> Grodsky, Dani, Antonia Violante, Anthony Barrows, and Wendi Gosliner. "Using Behavioral Science to Improve the WIC Experience: Lessons for the Field from San Jose, California." *Ideas 42*, May 2017. [http://www.ideas42.org/wp-content/uploads/2017/07/142\\_WIC-Paper-Final.pdf](http://www.ideas42.org/wp-content/uploads/2017/07/142_WIC-Paper-Final.pdf).
- <sup>270</sup> For a complete list of recommendations see the full article at: [http://www.ideas42.org/wp-content/uploads/2017/07/142\\_WIC-Paper-Final.pdf](http://www.ideas42.org/wp-content/uploads/2017/07/142_WIC-Paper-Final.pdf).
- <sup>271</sup> Grimm, Kirsten A., Sonia A. Kim, Amy L. Yaroch, and Kelley S. Scanlon. "Fruit and Vegetable Intake During Infancy and Early Childhood." *Pediatrics* 134, no. Suppl 1 (September 2014): S63-69. <https://doi.org/10.1542/peds.2014-0646K>.
- <sup>272</sup> Fletcher, Suzanne, Charlotte Wright, Angela Jones, Kathryn Parkinson, and Ashley Adamson. "Tracking of Toddler Fruit and Vegetable Preferences to Intake and Adiposity Later in Childhood." *Maternal & Child Nutrition* 13, no. 2 (April 1, 2017): e12290. <https://doi.org/10.1111/mcn.12290>.
- <sup>273</sup> Krebs-Smith, Susan M., Patricia M. Guenther, Amy F. Subar, Sharon I. Kirkpatrick, and Kevin W. Dodd. "Americans Do Not Meet Federal Dietary Recommendations." *The Journal of Nutrition* 140, no. 10 (October 2010): 1832-38. <https://doi.org/10.3945/jn.110.124826>.
- <sup>274</sup> Fox, Mary Kay, Susan Pac, Barbara Devaney, and Linda Jankowski. "Feeding Infants and Toddlers Study: What Foods Are Infants and Toddlers Eating?" *Journal of the American Dietetic Association* 104, no. 1 Suppl 1 (January 2004): s22-30. <https://doi.org/10.1016/j.jada.2003.10.026>.
- <sup>275</sup> Dollahite, Jamie S., Janet A. Nelson, Edward A. Frongillo, and Matthew R. Griffin. "Building Community Capacity through Enhanced Collaboration in the Farmers Market Nutrition Program." *Agriculture and Human Values* 22, no. 3 (2005): 339-54.
- <sup>276</sup> "WIC Farmers' Market Nutrition Program." United States Department of Agriculture, July 2018. <https://fns-prod.azureedge.net/sites/default/files/fmnp/WICFMNPFactSheet.pdf>.
- <sup>277</sup> Ibid
- <sup>278</sup> "locally grown," as defined by the USDA for this purpose means produce grown within state borders or areas in neighboring states adjacent to its borders.
- <sup>279</sup> Ibid
- <sup>280</sup> "Farmers' Market Nutrition Program: Overview." Accessed December 5, 2018. <https://www.fns.usda.gov/fmnp/overview>.
- <sup>281</sup> "WIC Farmers' Market Nutrition Program."
- <sup>282</sup> Ibid
- <sup>283</sup> "WIC Farmers' Market Nutrition Program FY 2017 Profile." United States Department of Agriculture, n.d. <https://fns-prod.azureedge.net/sites/default/files/fmnp/FMNP-FY-2017-Profile.pdf>.
- <sup>284</sup> Allen, Judy. "Wisconsin WIC Farmers' Market Nutrition Program (FMNP): 2007 Evaluation," n.d. <https://www.dhs.wisconsin.gov/publications/p4/p40153.pdf>.
- <sup>285</sup> Ibid
- <sup>286</sup> Owens, Nicole, and Amy Donley. "The Impact of the Farmers' Market Nutrition Program on Participating Florida Farmers: A Research Note." *Journal of Rural Social Sciences* 30, no. 1 (January 2015): 87-101.
- <sup>287</sup> Dollahite, Jamie S., Janet A. Nelson, Edward A. Frongillo, and Matthew R. Griffin. "Building Community Capacity through Enhanced Collaboration in the Farmers Market Nutrition Program." *Agriculture and Human Values* 22, no. 3 (2005): 339-54. For the full study, see, Just, Richard E., and Quinn Weninger. "Economic Evaluation of the Farmers' Market Nutrition Program." *American Journal of Agricultural Economics* 79, no. 3 (August 1997): 902-17.
- <sup>288</sup> Kropf, Mary L., David H. Holben, John P. Holcomb, and Heidi Anderson. "Food Security Status and Produce Intake and Behaviors of Special Supplemental Nutrition Program for Women, Infants, and Children and Farmers' Market Nutrition Program Participants." *Journal of the American Dietetic Association* 107, no. 11 (November 1, 2007): 1903-8. <https://doi.org/10.1016/j.jada.2007.08.014>.
- <sup>289</sup> Chart generated using data found in "FY 2011 - FY 2018 WIC Farmers' Market Nutrition Program Grant Amounts." United States Department of Agriculture, n.d. <https://fns-prod.azureedge.net/sites/default/files/fmnp/WFMNP-Grant-Amounts.pdf>.
- <sup>290</sup> "WIC FMNP." *Farmers Market Coalition* (blog). Accessed December 3, 2018. <https://farmersmarketcoalition.org/advocacy/wic-farmers-market-nutrition-program/>.

- <sup>291</sup> Blumberg, Renata, Yeon Bai, Pankaj Lal, Emily Fowler, and Paul Paez. “P111 - Examining WIC Farmers Market Nutrition Program Voucher Redemption in New Jersey.” *Journal of Nutrition Education and Behavior*, SNEB 2018 Annual Conference Proceedings, 50, no. 7, Supplement (July 1, 2018): S107. <https://doi.org/10.1016/j.jneb.2018.04.140>.
- <sup>292</sup> Kinnard, Kristin. “6 Ways to Improve Redemption Rates of Farmers’ Market Vouchers,” 2014. [file:///C:/Users/courtney\\_colwell/Downloads/Redemption+Rates+-+Farmers%2527+Market+Vouchers.pdf](file:///C:/Users/courtney_colwell/Downloads/Redemption+Rates+-+Farmers%2527+Market+Vouchers.pdf).
- <sup>293</sup> Ibid
- <sup>294</sup> For more information on NY initiatives, see Conrey, Elizabeth J., Edward A. Frongillo, Jamie S. Dollahite, and Matthew R. Griffin. “Integrated Program Enhancements Increased Utilization of Farmers’ Market Nutrition Program.” *The Journal of Nutrition* 133, no. 6 (June 1, 2003): 1841–44. <https://doi.org/10.1093/jn/133.6.1841>.
- <sup>295</sup> Ibid
- <sup>296</sup> Kinnard, Kristin. “6 Ways to Improve Redemption Rates of Farmers’ Market Vouchers,” 2014. [file:///C:/Users/courtney\\_colwell/Downloads/Redemption+Rates+-+Farmers%2527+Market+Vouchers.pdf](file:///C:/Users/courtney_colwell/Downloads/Redemption+Rates+-+Farmers%2527+Market+Vouchers.pdf).
- <sup>297</sup> Blumberg et al., “P111 - Examining WIC Farmers Market Nutrition Program Voucher Redemption in New Jersey.”
- <sup>298</sup> Kinnard, Kristin. “6 Ways to Improve Redemption Rates of Farmers’ Market Vouchers,”
- <sup>299</sup> Di Noia, Jennifer, Dorothy Monica, Alla Sikorskii, and Karen Weber Cullen. “Outcomes of a Randomized Controlled Trial of Nutrition Education to Promote Farmers’ Market Fruit and Vegetable Purchases and Consumption among Women Enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).” *BMC Nutrition* 3, no. 1 (June 21, 2017): 48. <https://doi.org/10.1186/s40795-017-0172-0>.
- <sup>300</sup> Kinnard, Kristin. “6 Ways to Improve Redemption Rates of Farmers’ Market Vouchers,”
- <sup>301</sup> Ibid
- <sup>302</sup> Hickson, Merideth, Stephanie Ettinger de Cuba, Ingrid Weiss, and John Cook. “Too Hungry to Learn: Food Insecurity and School Readiness.” Children’s Healthwatch, September 3, 2013. [http://www.childrenshealthwatch.org/wp-content/uploads/toohungrytolearn\\_report.pdf](http://www.childrenshealthwatch.org/wp-content/uploads/toohungrytolearn_report.pdf)
- <sup>303</sup> Ibid
- <sup>304</sup> Ibid
- <sup>305</sup> Ibid
- <sup>306</sup> “Early Childhood Research Brief: A National Survey of Low-Income Parents of Young Kids.” No Kid Hungry, Share Our Strength, 2017. <http://bestpractices.nokidhungry.org/sites/default/files/download-resource/National%20Early%20Childhood%20Survey%20Summary%20Brief.pdf>.
- <sup>307</sup> “History of CACFP.” National CACFP Forum. Accessed November 1, 2018. <http://www.cacfpforum.com/history-of-cacfp.html>.
- <sup>308</sup> Ibid
- <sup>309</sup> Hamilton, William L, Eric M Stickney, Nancy R Burstein, Lawrence S Bernstein, and Linda Ghelfi. “Family Child Care Home Participation in the CACFP—Effects of Reimbursement Tiering: A Report to Congress on the Family Child Care Homes Legislative Changes Study,” n.d., 3.
- <sup>310</sup> “History of CACFP.”
- <sup>311</sup> Food Research & Action Center. “Facts: The Child and Adult Care Food Program (CACFP),” February 2018. <http://frac.org/wp-content/uploads/cacfp-fact-sheet.pdf>.
- <sup>312</sup> Ibid
- <sup>313</sup> U.S. Department of Agriculture Food and Nutrition Service. “Adult Day Care: A Child and Adult Care Food Program Handbook,” January 2014. <https://fns-prod.azureedge.net/sites/default/files/CACFPAdult%20DayCareHandbook.pdf>.
- <sup>314</sup> “About Area Eligibility | Food and Nutrition Service.” Accessed November 1, 2018. <https://www.fns.usda.gov/cacfp/about-area-eligibility>.
- <sup>315</sup> Aussenberg, Randy, and Kara Billings. “School Meals Programs and Other USDA Child Nutrition Programs: A Primer.” Congressional Research Service, August 24, 2018. <https://fas.org/sfp/crs/misc/R43783.pdf>.
- <sup>316</sup> Ibid
- <sup>317</sup> “Child and Adult Care Food Program (CACFP).” *Food Research & Action Center* (blog). Accessed November 1, 2018. <http://frac.org/programs/child-adult-care-food-program>.
- <sup>318</sup> Aussenberg and Billings, “School Meals Programs and Other USDA Child Nutrition Programs: A Primer.”
- <sup>319</sup> Ibid
- <sup>320</sup> “Child and Adult Care Food Program Participation Trends.” Food Research & Action Center, n.d. <http://frac.org/wp-content/uploads/cacfp-participation-trends-fact-sheet.pdf>.
- <sup>321</sup> Heflin, Colleen, Irma Arteaga, and Sara Gable. “The Child and Adult Care Food Program and Food Insecurity.” *Social Service Review* 89 (March 1, 2015): 77–98. <https://doi.org/10.1086/679760>.
- <sup>322</sup> Korenman, S., K. S. Abner, R. Kaestner, and R. A. Gordon. “The Child and Adult Care Food Program and the Nutrition of Preschoolers.” *Early Childhood Research Quarterly* 28, no. 2 (2013): 325–36. <https://doi.org/10.1016/j.ecresq.2012.07.007>.
- <sup>323</sup> Ritchie, Lorrene D., Maria Boyle, Kumar Chandran, Phil Spector, Shannon E. Whaley, Paula James, Sarah Samuels, Ken Hecht, and Patricia Crawford. “Participation in the Child and Adult Care Food Program Is Associated with More Nutritious Foods and Beverages in Child Care.” *Childhood Obesity (Print)* 8, no. 3 (June 2012): 224–29. <https://doi.org/10.1089/chi.2011.0061>.
- <sup>324</sup> Cotwright, Caree J., Haley Bradley, Nathalie Celestin, Shani Drake, Kim Love, and Leann Birch. “Beverage Policy Implementation by Child and Adult Care Food Program Participation and Program Type: A Statewide Examination in Georgia.” *Childhood Obesity*, September 27, 2018. <https://doi.org/10.1089/chi.2018.0101>.
- <sup>325</sup> Glantz, Frederic, Amy Germuth, Theodore Macaluso, and Karen Westat. “CACFP Sponsor and Provider Characteristics,” August 2018. <https://www.fns.usda.gov/child-and-adult-care-food-program-cacfp-sponsor-and-provider-characteristics-study>.
- <sup>326</sup> Glantz et al., “Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study.”
- <sup>327</sup> Binder, Christine, Joel Berg, Maryam Adamu, and Katie Hamm. “How the Child and Adult Care Food Program Improves Early Childhood Education.” Accessed November 1, 2018. <https://www.americanprogress.org/issues/early-childhood/reports/2015/06/11/114916/how-the-child-and-adult-care-food-program-improves-early-childhood-education/>.
- <sup>328</sup> Ibid

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<sup>329</sup> Kirlin et al, U.S. Department of Agriculture, Food and Nutrition Service, Office of Research, Nutrition and Analysis, “Report to Congress: The Nebraska Rural Area Eligibility Determination Pilot for the CACFP.” Nutrition Assistance Program Report Series, No. CN-08-ND.. Alexandria, VA: July 2008.

<sup>330</sup> Glantz et al., “Child and Adult Care Food Program (CACFP) Sponsor and Provider Characteristics Study.”

<sup>331</sup> Yaktine, Ann L., Carol West Suiitor, and Sheila Moats. *The Child and Adult Care Food Program*. National Academies Press (US), 2011. <https://www.ncbi.nlm.nih.gov/books/NBK209814/>.

<sup>332</sup> Binder et al., “How the Child and Adult Care Food Program Improves Early Childhood Education,” 10

<sup>333</sup> Binder et al., “How the Child and Adult Care Food Program Improves Early Childhood Education.”

<sup>334</sup> For further information, see FRAC’s center for best practices

<sup>335</sup> “Child and Adult Care Food Program (CACFP).” *The State of Obesity* (blog). Accessed November 1, 2018.

<https://stateofobesity.org/policy/cacfp/>.

<sup>336</sup> “State Policies to Prevent Obesity.” *The State of Obesity* (blog). Accessed November 1, 2018. <https://stateofobesity.org/state-policy/>.

<sup>337</sup> “Child Nutrition Resource Center.” *Reinvestment Fund* (blog). Accessed November 1, 2018.

<https://www.reinvestment.com/childnutritionresourcecenter/> Note: the program also provides assistance for summer meals cites

<sup>338</sup> “DC Hunger Solutions: Healthy Schools Act.” Accessed October 17, 2018. [http://www.dchunger.org/currentbills/healthy\\_tots\\_act.htm](http://www.dchunger.org/currentbills/healthy_tots_act.htm).

<sup>339</sup> “DC Food Policy Council Meeting Notes, Food Procurement Working Group Meeting.” November 3, 2016.

<https://dcfoodpolicycouncilorg.files.wordpress.com/2016/02/procurement-fpc-working-group-nov-3-2016-meeting-notes.pdf>